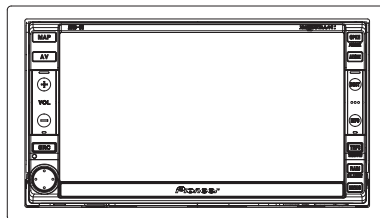


# Service Manual



AVIC-D1/UC

ORDER NO.  
**CRT3466**

DOUBLE-DIN DVD NAVIGATION SYSTEM

# AVIC-D1 /UC

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3016	CRT3056	MS3	DVD Mech. Module:Circuit Description, Mech. Description, Disassembly
CX-3158	CRT3394	S10.1AAC	CD Mech. Module:Circuit Description, Mech. Description, Disassembly

This product has the unit part number as below.

Unit Part No.	Description
CPN1951	Navigation Unit

\*) The unit part numbers listed above are not for the service components.



For details, refer to "Important Check Points for Good Servicing".

# SAFETY INFORMATION

## CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

## WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: [www.eiae.org](http://www.eiae.org).

## ● Service Precautions

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

### DVD MECHANISM MODULE section precaution

1. EJECT LOCK MODE for DVD mechanism  
In order to enter "EJECT LOCK" mode, reset start while pressing the "AV" and "INFO" keys together. Pressing the "AV" and "INFO" keys until monitor backlight is turned on.  
In order to exit "EJECT LOCK" mode, follow the same steps to enter this mode.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY" .
4. After replacing the pickup unit, be sure to skew adjustment.
5. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.

### CD MECHANISM MODULE section precaution

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
3. After replacing the pickup unit, be sure to check the grating.



is a trademark of DVD Format/Logo Licensing Corporation.



## [Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.  
Please be sure to confirm and follow these procedures.

### 1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.  
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.  
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.  
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.  
Please pay attention to your surroundings and repair safely.

### 2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.  
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

### 3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.  
Make sure the proper amount is applied.

### 4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

### 5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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# 1. SPECIFICATIONS

## General

Rated power source.....	14.4 V DC (10.8 - 15.1 V allowable)
Grounding system.....	Negative type
Max. current consumption .....	10.0 A
Backup current .....	3.0 mA or less
Navigation unit: Dimensions (W x H x D):	
DIN	
Chassis.....	178 x 100 x 160 mm (7 x 3-7/8 x 6-1/4 in.)
Nose.....	191 x 114 x 5 mm (7-1/2 x 4-1/2 x 1/4 in.)
D	
Chassis.....	178 x 100 x 165 mm (7 x 3-7/8 x 6-1/2 in.)
Nose.....	171 x 93 x 24 mm (6-3/4 x 3-5/8 x 1 in.)
Weight .....	2.9 kg (6.4 lbs)

## Navigation

GPS Receiver:	
System.....	L1, C/Acode GPS SPS (Standard Positioning Service)
Reception system.....	8-channel multi-channel reception system
Reception frequency...	1,575.42 MHz
Sensitivity .....	-130 dBm
Position update frequency .....	Approx. once per second
GPS antenna:	
Antenna.....	Micro strip flat antenna/ right-handed helical polari- zation
Antenna cable.....	5.0 m (16 ft. 5 in.)
Dimensions (W x H x D) .....	33 x 13 x 36 mm (1-1/4 x 1/2 x 1-3/8 in.)
Weight .....	105 g(0.23 lbs)

## Display

Screen size/aspect ratio.....	6.5 inch wide/16:9 (effective display area: 144 x 76 mm)
Pixels .....	336,960 (1,440 x 234)
Type.....	TFT active matrix, transmis- sive type
Color system.....	NTSC
Operating temperature range .....	-14 – +122°F
Storage temperature range .....	-4 – +176°F
Angle adjustment .....	0 – 21° (initial settings: 0°)

## Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output .....	50 W x 4 50 W x 2 ch/4 Ω + 70 W x 1 ch/2 Ω (for subwoofer)
Load impedance.....	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance .....	2.0 V/100 ohm
Equalizer (3-Band Parametric Equalizer):	
Low	
Frequency.....	40/80/100/160 Hz
Q Factor.....	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB
Mid	
Frequency.....	200/500/1k/2k Hz
Q Factor.....	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB
High	
Frequency.....	3.15k/8k/10k/12.5k Hz
Q Factor.....	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain.....	±12dB
Loudness contour	
Low .....	+3.5 dB (100 Hz), +3 dB (10 kHz)
Mid.....	+10 dB (100 Hz), +6.5 dB (10 kHz)
High .....	+11 dB (100 Hz), +11 dB (10 kHz) (volume: -30 dB)
HPF:	
Frequency.....	50/80/125 Hz
Slope.....	-12 dB/oct
Subwoofer:	
Frequency.....	50/80/125 Hz
Slope.....	-18 dB/oct
Gain.....	±12dB
Phase .....	Normal/Reverse
CD Drive	
System.....	Compact disc audio system
Usable discs .....	Compact disc
Signal format:	
Sampling frequency.....	44.1 kHz
Number of quantization bits .....	16; linear
Frequency characteristics...	5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio.....	94 dB (1 kHz) (IHF-A net- work)
Dynamic range.....	92 dB (1 kHz)
Number of channels.....	2 (stereo)
MP3 decoding format.....	MPEG-1 & 2 Audio Layer 3
WMA decoding format .....	Ver 7, 7.1, 8, 9 (2ch audio)
Wave signal format.....	Linear-PCM, MS ADPCM
FM tuner	
Frequency range.....	87.9 – 107.9 MHz

A

Usable sensitivity..... 8 dBf (0.7  $\mu$ V/75  $\Omega$ , mono, S/  
N: 30 dB)  
50 dB quieting sensitivity..... 10 dBf (0.9  $\mu$ V/75  $\Omega$ , mono)  
Signal-to-noise ratio..... 75 dB (IHF-A network)  
Distortion ..... 0.3 % (at 65 dBf, 1 kHz,  
stereo)  
0.1 % (at 65 dBf, 1 kHz,  
mono)  
Frequency response..... 30 – 15,000 Hz ( $\pm$ 3 dB)  
Stereo separation..... 45 dB (at 65 dBf, 1 kHz)  
Selectivity..... 80 dB ( $\pm$ 200 kHz)  
Three-signal intermodulation (desired signal level)  
..... 30 dBf (two undesired signal  
level: 100 dBf)

B

**AM tuner**  
Frequency range.....530 – 1,710 kHz (10 kHz)  
Usable sensitivity..... 18  $\mu$ V (S/N: 20 dB)  
Signal-to-noise ratio..... 65 dB (IHF-A network)

**Note:**  
• Specifications and the design are subject to  
possible modifications without notice due to  
improvements.

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AVIC-D1/UC

## 4

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## PACKING SECTION PARTS LIST

Mark No.	Description	Part No.
* 1-1	Card	ARY1048
1-2	Caution Card	CRP1310
* 1-3	Registration Card	CRY1238
1-4	Polyethylene Bag	CEG1116
1-5	Owner's Manual/POC/FRE	CRB2091
1-6	Owner's Manual/POC/FRE	CRB2090
2-1	Owner's Manual	CRB2088
2-2	Owner's Manual	CRB2089
2-3	Installation Manual	CRD3983
2-4	Connector	CKX1049
2-5	Polyethylene Bag	CEG1116
3	Cover	CEG1359
4	Carton	CHG5523
5	Contain Box	CHL5523
6	Protector	CHP2273
7	Protector	CHP3006
8	Protector	CHP3007
9	Protector	CHP3045
10	Protector	CHP3046
11	Cord	CDE5044
12	Cord	CDE6825
13	Cord Assy	CDE7838
14	Cord Assy	CDE7839
15	Screw Assy	CEA3797
16	Screw	BMZ50P060FTC
* 17	Polyethylene Bag	CEG-127
18	Screw	CMZ50P060FTC
19	Sub Carton	CHA3298
20	Panel	CNS8298
21	GPS Antenna Assy	CXC4864
22	Water Proof Pad	CZN5442
23	Sheet	CZN7008
24	DVD-ROM	CPJ1167

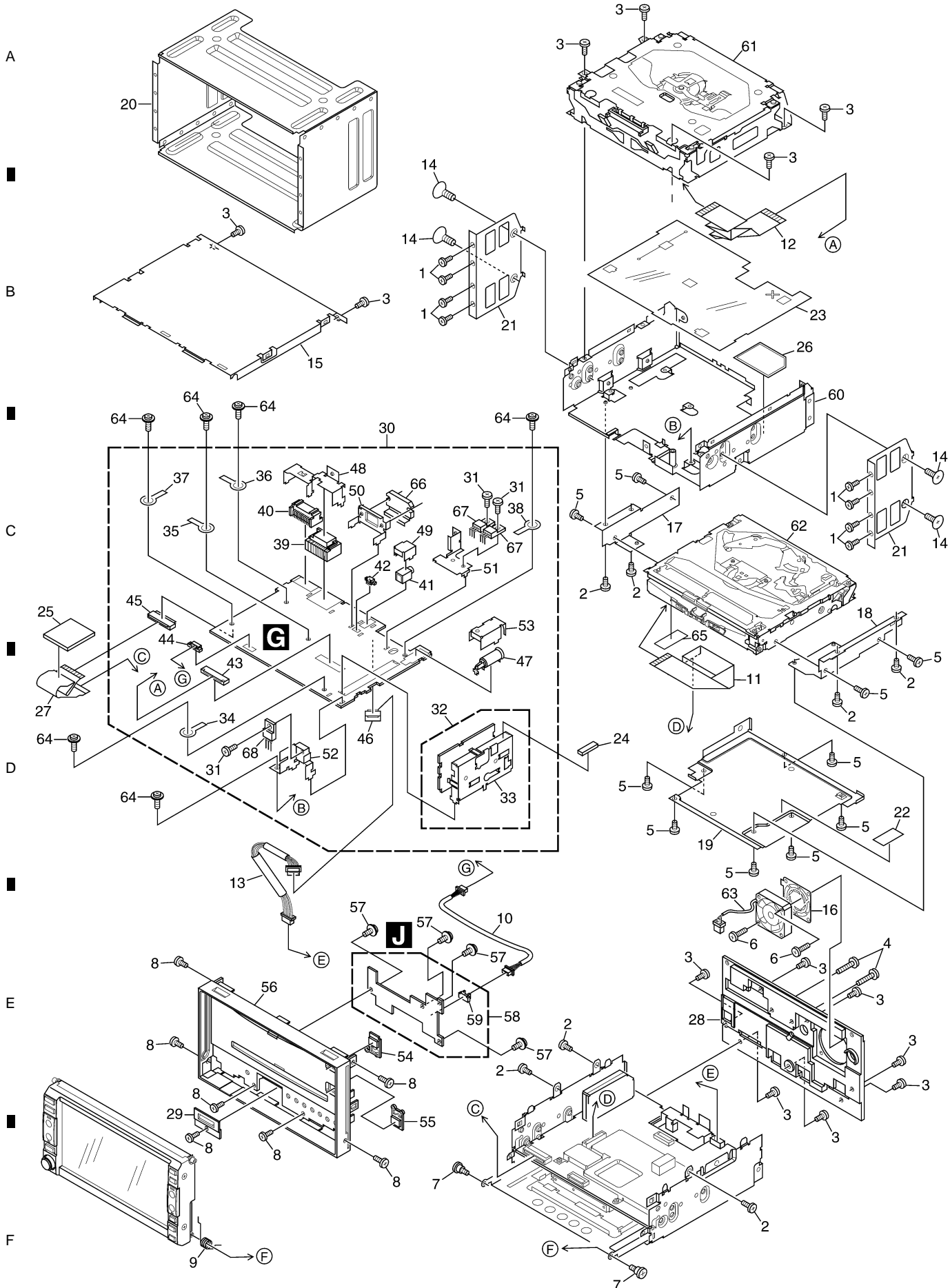
### ● Owner's Manual, Installation Manual

Part No.	Language
CRB2088, CRB2089	English
CRB2090, CRB2091	French
CRD3983	English, French

● Be careful when ordering parts, as the following unit of this mainframe is described on several pages.

Description	Part No.	PCB name	Reference page and No.
MONI_PANEL Unit	CWM9920	MONITOR PCB	Page 15 No. 18(1/2)
		KEYBOARD PCB	Page 15 No. 18(2/2)
		PANEL PCB	Page 11 No. 58

## 2.2 EXTERIOR (1)





# EXTERIOR (1) SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	Screw	BMZ26P030FTB	50	Holder	CND2669	
2	Screw	BMZ26P040FTC				A
3	Screw	BMZ26P060FTB	51	Holder	CND2670	
4	Screw	BMZ26P140FTC	52	Holder	CND2671	
5	Screw(M2x3)	CBA1527	53	Holder	CND2685	
			54	Button(CD EJECT)	CAC9119	
6	Screw(M3x10)	CBA1637	55	Button(DVD EJECT)	CAC9120	
7	Screw(M2x2)	CBA1735				
8	Screw(M2x3)	CBA1877	56	Panel Unit	CXC4435	
9	Spring	CBH2888	57	Screw	IMS26P040FTC	
10	Cord Assy	CDE7908	58	MONI_PANEL Unit	CWM9920	
			59	Connector(CN5901)	CKS4825	
11	FFC	CDE8006	60	Chassis Unit	CXC4333	B
12	FFC	CDE8007				
13	Cord Assy	CDE8008	61	CD Mechanism Module(S10.1AACA)	CXK5668	
14	Screw	CMZ50P060FTC	62	DVD Mechanism Module(MS3)	CXK6333	
15	Case	CNB3109	63	Fan Motor	CXM1320	
			64	Screw	ISS26P055FTC	
16	Cover	CND1509	65	Tape	CNM9890	
17	Holder	CND2682				
18	Holder	CND2683	66	IC(IC4200)	PAL007B	
19	Shield	CND2775	67	Transistor(Q1900, 1902)	2SB1185	
20	Holder	CND2794	68	Transistor(Q1922)	2SD2396	C
21	Bracket	CND2795				
22	Insulator	CNM8550				
23	Insulator	CNM9442				
24	Gasket	CNM9593				
25	Cushion	CNM9653				
26	Shield	CNM9656				
27	Flexible PCB	CNP8450				
28	Heat Sink	CNR1785				
29	Cover	CNS8290				
30	System Unit	CWM9918				D
31	Screw	BMZ26P050FTC				
32	FM/AM Tuner Unit	CWE1646				
33	Holder	CND1054				
34	Terminal(CN1302)	CKF1064				
35	Terminal(CN1303)	CKF1064				
36	Terminal(CN1304)	CKF1064				
37	Terminal(CN1305)	CKF1064				
38	Terminal(CN4301)	CKF1064				E
39	Connector(CN1801)	CKM1438				
40	Connector(CN1401)	CKM1460				
41	Jack(CN1450)	CKN1036				
42	Connector(CN1803)	CKS4822				
43	Connector(CN1301)	CKS4919				
44	Connector(CN1651)	CKS4980				
45	Connector(CN1701)	CKS5110				
46	Connector(CN1802)	CKS5270				
47	Antenna Jack(CN4300)	CKX1056				F
48	Holder	CND2667				
49	Holder	CND2668				

△



## EXTERIOR (2) SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	Drive Unit	CXC4423	50	Insulator	CNM9438	
2	Screw(M2x6)	CBA1399				A
3	Screw(M2x1.5)	CBA1615	51	Insulator	CNM9439	
4	Screw(M2x2)	CBA1771	52	GPS Unit	CWX3141	
5	Spring	CZB3092	53	Connector(CN461)	CKS4280	
			54	Connector(CN504)	CKS4432	
6	Spring	CZB3093	55	Shield	CNC9191	
7	Screw	CZB3097				
8	Washer	CZB5003	56	Shield	CNC9192	
9	Shaft	CZL3010	57	Holder	CND1535	
10	Gear	CZN7011	58	Connector(CN2)	DKN1236	
			59	Connector Unit	CWM9921	
11	Gear	CZN7012	60	Terminal(CN2807)	CKF1064	B
12	Gear	CZN7013				
13	Rack	CZN7014	61	Connector(CN2802)	CKS3414	
14	Holder	CZN7015	62	Connector(CN2801)	CKS4590	
15	Roller	CZN7052	63	Connector(CN2806)	CKS4600	
			64	Connector(CN2804)	CKS5209	
16	Holder	CZN7042	65	Holder(CN58)	CNC2218	
17	Holder	CZN7043				
18	Sheet	CZN7044	66	Holder	CND2673	
19	Main PCB Unit	CZW3097	67	FFC	CDE7864	
20	Screw	BMZ26P050FTC	68	FFC	CDE8005	
			69	Screw	ISS26P055FTC	C
21	Connector(CN2)	CKS4600	70	.....		
22	Heat Sink	CND1228				
23	Connector(CN1)	CZK3071	71	Cushion	CNM9416	
24	Transistor(Q1)	2SB1185				
25	Bracket Unit	CZX5101				
26	Motor Unit(FLAP)(M10)	CZX5102				
27	Chassis Unit	CZX5127				
28	Frame Unit	CZX5160				
29	Screw	JFZ20P020FTC				
30	Washer	YE15S				D
31	CC Unit	CWM9919				
32	Terminal(CN100)	CKF1064				
33	Terminal(CN601)	CKF1064				
34	Terminal(CN602)	CKF1064				
35	Terminal(CN802)	CKF1064				
36	Connector(CN701)	CKS3805				
37	Connector(CN702)	CKS3991				
38	Connector(CN551)	CKS4065				E
39	Connector(CN651)	CKS4473				
40	Connector(CN801)	CKS4674				
41	Connector(CN605)	CKS5110				
42	Holder	CND2672				
43	Shield	CND2675				
44	Shield	CND2676				
45	Shield	CND2679				
46	Shield	CND2680				
47	Sheet	CNM6903				F
48	Insulator	CNM9436				
49	Insulator	CNM9437				

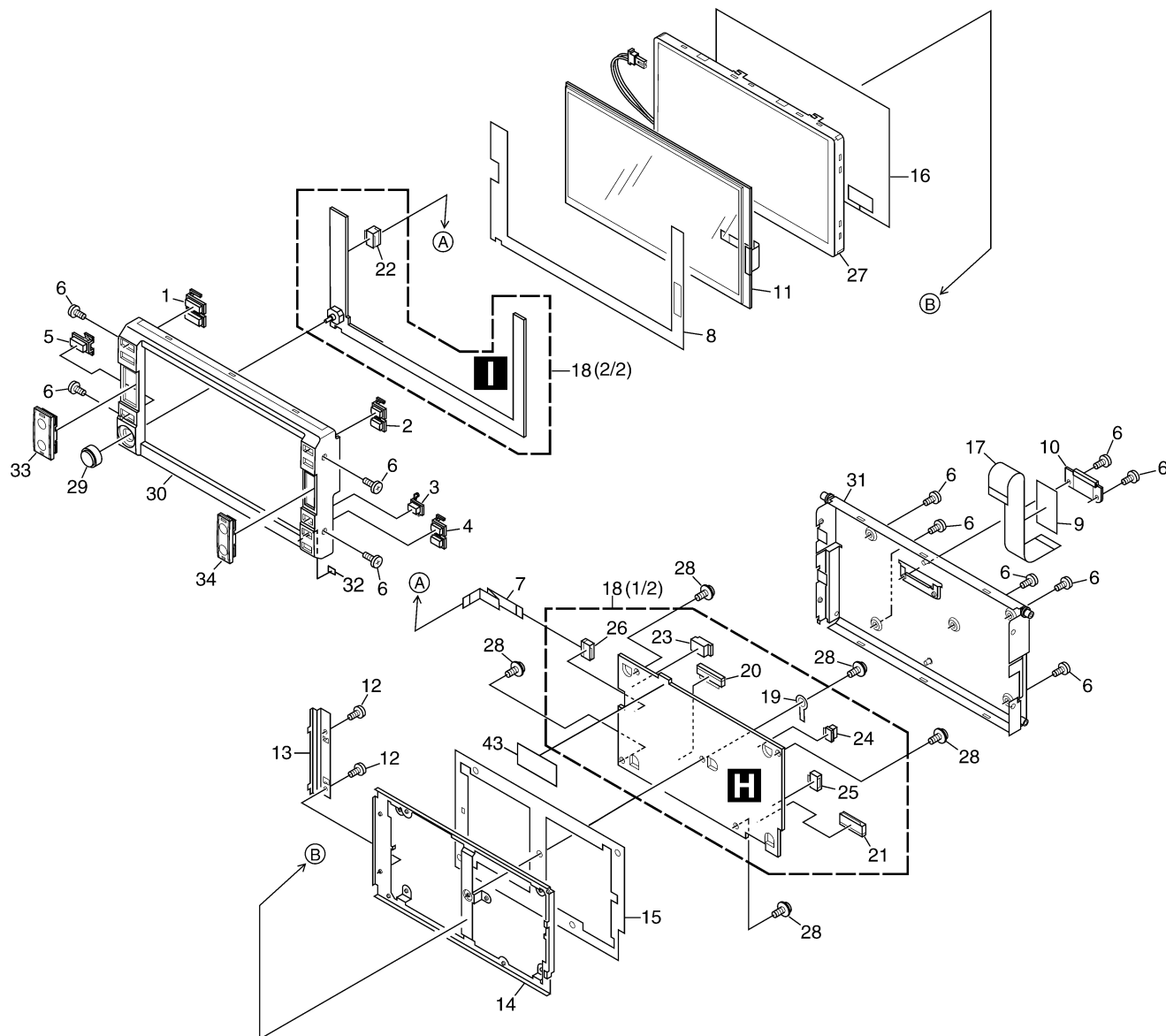
## 2.4 EXTERIOR (3)

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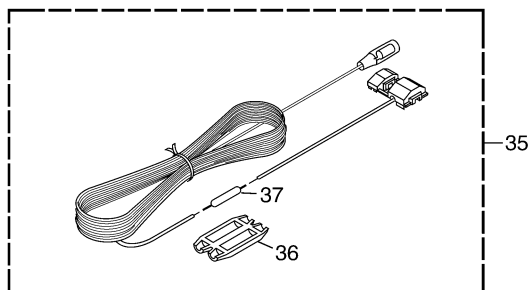
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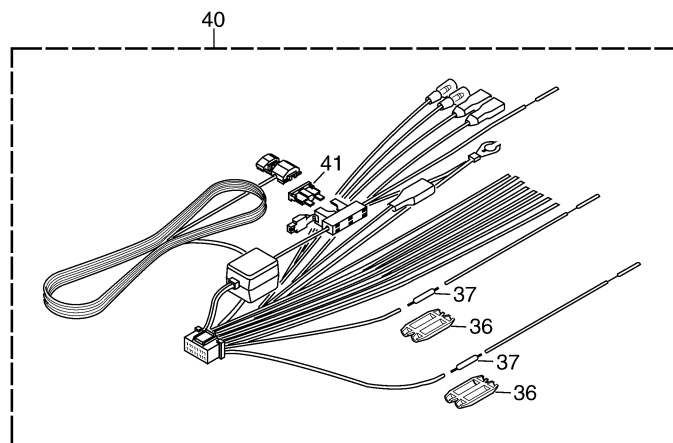
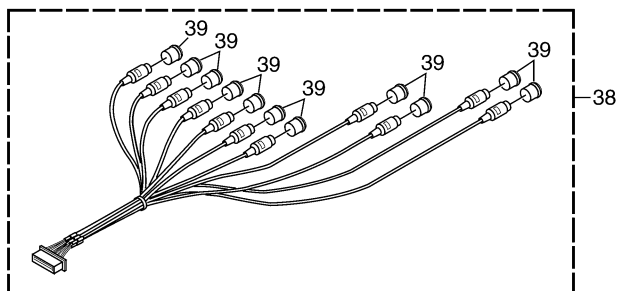
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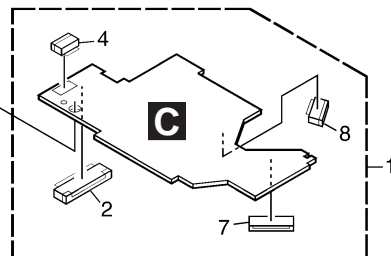
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## EXTERIOR (3) SECTION PARTS LIST

Mark No.	Description	Part No.
1	Button(MAP, AV)	CAC9112
2	Button(OPEN, ANGLE)	CAC9114
3	Button(TRFC)	CAC9115
4	Button(PADJ, MEMO)	CAC9118
5	Button(SRC)	CAC9429
6	Screw(M2x3)	CBA1877
7	FFC	CDE8003
8	Insulator	CNM9475
9	Cover	CNM9655
10	Guide	CNV5169
11	Touch Panel	CSX1085
12	Screw(M2x2)	CBA1771
13	Holder	CNC9991
14	Holder	CND3075
15	Insulator	CNM9567
16	Insulator	CNM9803
17	Flexible PCB	CNP8744
18	MONI_PANEL Unit	CWM9920
19	Terminal(CN5003)	CKF1064
20	Connector(CN5002)	CKS3968
21	Connector(CN5801)	CKS3991
22	Connector(CN5700)	CKS4130
23	Connector(CN5331)	CKS4428
24	Connector(CN5009)	CKS4496
25	Connector(CN5007)	CKS4675
26	Connector(CN5008)	CKS5208
27	LCD Panel	CWX3229
28	Screw	PMB20P040FTC
29	Knob Unit	CXC4417
30	Grille Unit	CXC4434
31	Case Unit	CXC4436
32	Sheet	CNM9862
33	Button Unit(VOL)	CXC4455
34	Button Unit(DEST, INFO)	CXC4456
35	Cord	CDE6825
36	Cap	CNS1472
37	Resistor	RS1/2PMF102J
38	Cord Assy	CDE7838
39	Cap	CNV6727
40	Cord Assy	CDE7839
⚠ 41	Fuse(10A)	CEK1136
42	Cap	CNS1472
43	Shield	CNM9858

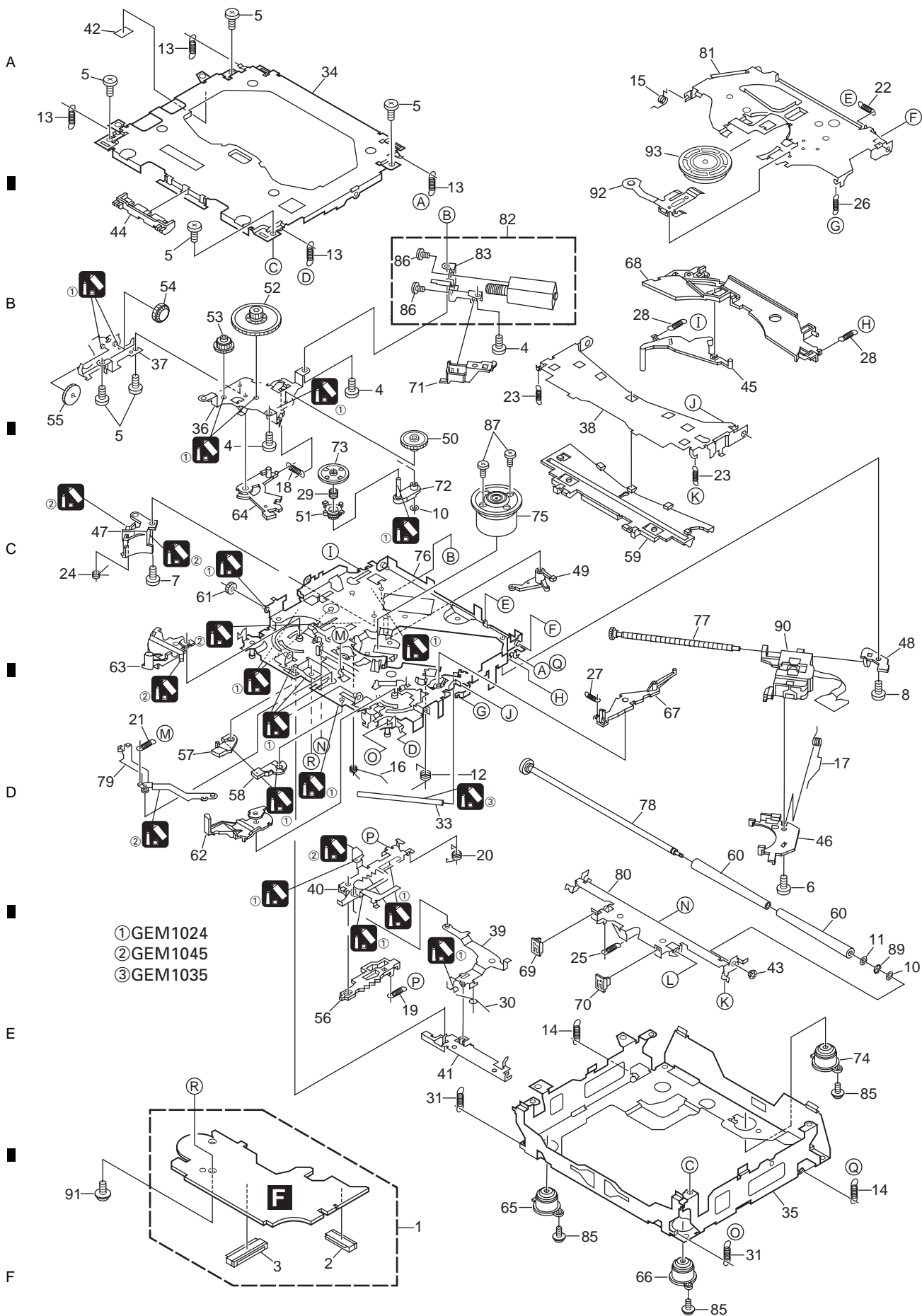
## 4



# DVD MECHANISM MODULE(MS3) SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.	
1	DVD Core Unit(MS3R)	CWX3178				
2	Connector(CN601)	CKS5055	56	Arm	CNV7162	
3	*****		* 57	Arm	CNV7163	A
4	Connector(CN1202)	CKS5017	58	Arm	CNV7164	
5	*****		59	Roller	CNV7165	
			60	Arm	CNV7166	
6	*****					
7	Connector(CN1101)	CKS4842	61	Guide	CNV8093	
8	Connector(CN1201)	CKS5043	62	Gear	CNV7169	
9	Screw	BMZ20P020FTC	63	Gear	CNV7170	
10	Screw(M2 x 3.5)	CBA1571	64	Gear	CNV7171	
			65	Gear(Black)	CNV7172	
11	Screw(M2 x 2.5)	CBA1623				
12	Washer	CBF1038	66	Gear	CNV7173	
13	Washer	CBF1064	67	Gear	CNV7174	B
14	Spring	CBH2586	68	Rack	CNV7175	
15	Spring	CBH2587	69	Gear	CNV7176	
			70	Arm	CNV8077	
16	Spring	CBH2588				
17	Spring	CBH2589	71	Lever	CNV7178	
18	Spring	CBH2590	72	Lever	CNV7179	
19	Spring	CBH2591	73	Screw	IMS20P030FTC	
20	Spring	CBH2592	74	Gear	CNV7181	
			75	Holder	CNV7183	
21	Spring	CBH2593				
22	Spring	CBH2594	76	Holder	CNV7184	
23	Spring	CBH2595	77	Guide	CNV7745	C
24	Spring	CBH2596	78	Roller	CNV7344	
25	Spring	CBH2597	79	Damper	CNV7470	
			80	Damper	CNV7471	
26	Spring	CBH2598				
27	Spring	CBH2599	81	Collar	CNV7645	
28	Spring	CBH2600	82	Compound Unit(A)	CWX3154	
29	Spring	CBH2601	83	Screw(M1.4x1.4)	CBA1787	
30	Spring	CBH2602	84	Compound Unit(B)	CWX3156	
			85	Washer	YE20FTC	
31	Spring	CBH2603				
32	Spring	CBH2604	86	Chassis Unit	CXC3629	
33	Spring	CBH2605	87	Arm Unit	CXB8681	D
34	Spring	CBH2711	88	Frame Unit	CXB8683	
35	Spring	CBL1564	89	Arm Unit	CXC4701	
			90	Bracket Unit	CXB8685	
36	Pickup Unit(Service)	CXX1640				
37	Shaft	CLA3881	91	Motor Unit(LOADING)(M1)	CXC4659	
38	Shaft	CLA4206	92	Motor Unit(CARRIAGE)(M2)	CXC4314	
39	Shaft	CLA4207	93	Screw Unit	CXB8689	
40	Lever	CNC9933	94	Roller Unit	CXB8690	
			95	Motor(SPINDLE)(M3)	CXM1308	
41	Holder	CNC9939				
42	Holder	CND2251	96	Screw	JFZ20P018FTC	
43	Holder	CNC9941	97	Photo-transistor(Q1299)	CPT231SCTD	E
44	Frame	CND2250	98	Switch(S1201)	CSN1069	
45	Sheet	CNM6883	99	Spring Switch(S1204)	CSN1070	
			100	Resistor(R1298)	RS1/16S0R0J	
46	Sheet	CNM8283				
47	Sheet	CNM8643	101	Guide	CNV7615	
48	Lever	CNV8076	102	Screw(M1.7x1.2)	CBA1572	
49	Lever	CNV7155	103	Arm	CNV7742	
50	Cam	CNV7156	104	Arm	CNV7743	
			105	Spring	CBH2710	
51	Rack	CNV7157				
52	Clamper	CNV7158	106	Spring	CBL1643	F
53	Arm	CNV7159	107	Spring	CBH2712	
54	Arm	CNV7160	108	Pickup Unit(Service)(Screw)	GXX1234	
55	Arm	CNV7161	109	Screw Assy	CXX1750	

## 2.6 CD MECHANISM MODULE(S10.1AACA)



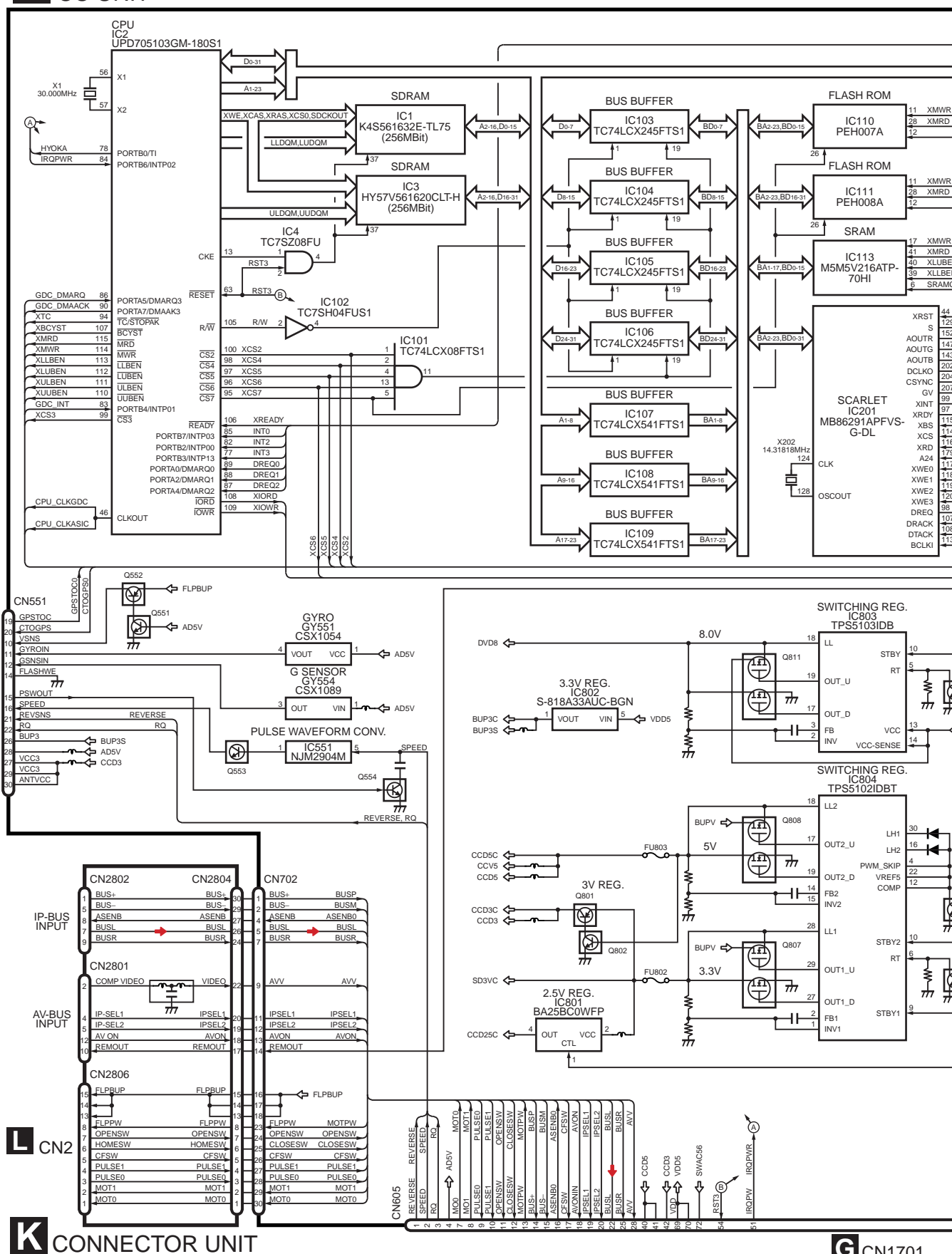


**CD MECHANISM MODULE(S10.1AACA) SECTION PARTS LIST**

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	CD Core Unit(S10.1)	CWX3096	50	Gear	CNV8379
2	Connector(CN101)	CKS4182			
3	Connector(CN901)	CKS4017	51	Gear	CNV8380
4	Screw	BMZ20P035FTC	52	Gear	CNV8381
5	Screw	BSZ20P040FTC	53	Gear	CNV8382
			54	Gear	CNV8383
6	Screw(M2x4)	CBA1362	55	Gear	CNV8384
7	Screw(M2x3)	CBA1824			
8	Screw(M2x3)	CBA1825	56	Rack	CNV8385
9	*****		57	Arm	CNV8386
10	Washer	CBF1038	58	Arm	CNV8387
			59	Guide	CNV8388
11	Washer	CBF1060	60	Roller	CNV7218
12	Spring	CBH2390			
13	Spring	CBH2606	61	Gear	CNV8389
14	Spring	CBH2607	62	Arm	CNV8391
15	Spring	CBH2608	63	Arm	CNV8390
			64	Arm	CNV8392
16	Spring	CBH2609	65	Damper	CNV7313
17	Spring	CBH2610			
18	Spring	CBH2735	66	Damper	CNV7314
19	Spring	CBH2612	67	Arm	CNV8394
20	Spring	CBH2613	68	Arm	CNV8395
			69	Guide	CNV8396
21	Spring	CBH2614	70	Guide	CNV8397
22	Spring	CBH2615			
23	Spring	CBH2616	71	Holder	CNV8398
24	Spring	CBH2617	72	Arm	CNV8402
25	Spring	CBH2620	73	Gear	CNV8400
			74	Damper	CNV7618
26	Spring	CBH2621	75	Motor Unit(M1)	CXC4440
27	Spring	CBH2641			
28	Spring	CBH2642	76	Chassis Unit	CXC2318
29	Spring	CBH2643	77	Screw Unit	CXB8729
30	Spring	CBH2659	78	Gear Unit	CXC2397
			79	Arm Unit	CXC2316
31	Spring	CBH2688	80	Arm	CND1896
32	*****				
33	Shaft	CLA4441	81	Arm	CND1894
34	Frame	CNC9962	82	Motor Unit(M2)	CXB8933
35	Frame	CNC9963	83	Bracket	CNC9985
			84	*****	
36	Bracket	CND2712	85	Screw(M2x5)	EBA1028
37	Bracket	CND1895			
38	Arm	CNC9968	86	Screw	JFZ20P020FTC
39	Arm	CND1909	87	Screw	JGZ17P022FTC
40	Lever	CND2032	88	*****	
			89	Washer	YE20FTC
41	Lever	CNC9984	90	Pickup Unit(P10)(Service)	CXX1641
42	Sheet	CNM8134			
43	Collar	CNV7798	91	Screw	IMS26P030FTC
44	Guide	CNV7799	92	Spring	CBL1635
45	Arm	CNV8403	93	Clamper	CNV8372
46	Rack	CNV8374			
47	Holder	CNV8376			
48	Holder	CNV8377			
49	Arm	CNV8378			

### 3.1 BLOCK DIAGRAM

**A** CC UNIT

**G** CN1701

## CONNECTOR UNIT

AVIC-D1/UC

**G** CN1701



# G SYSTEM UNIT

A

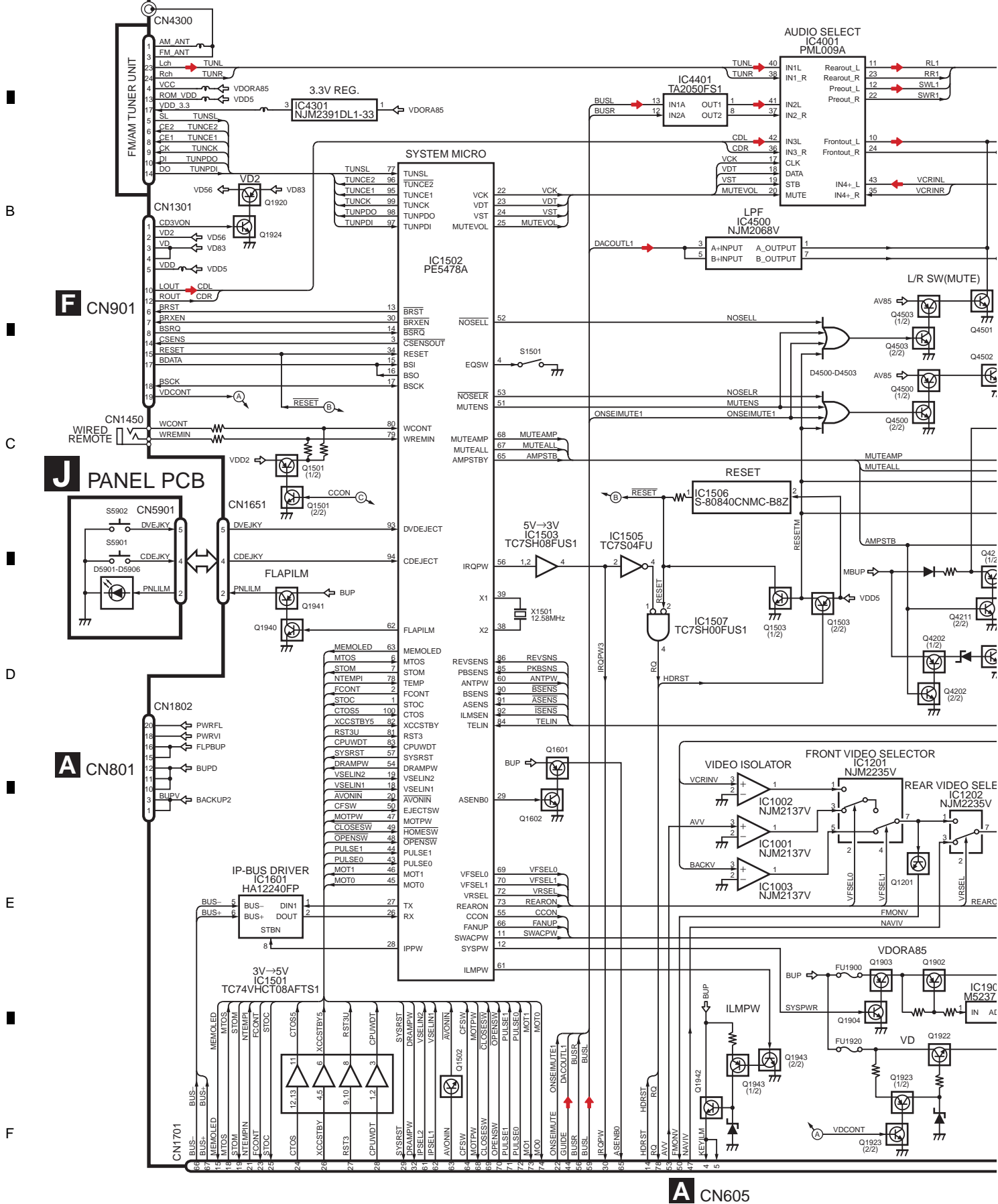
B

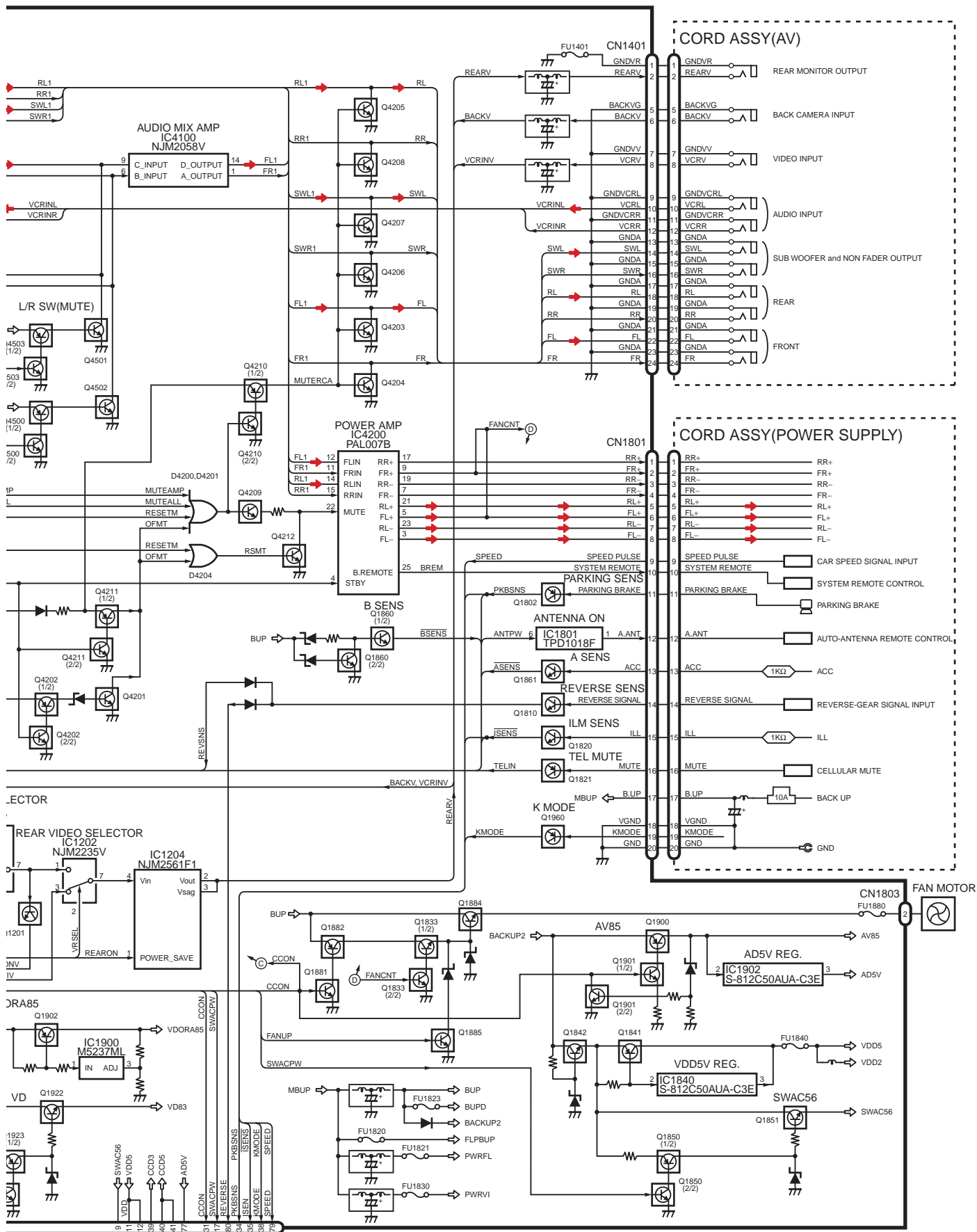
C

D

E

F

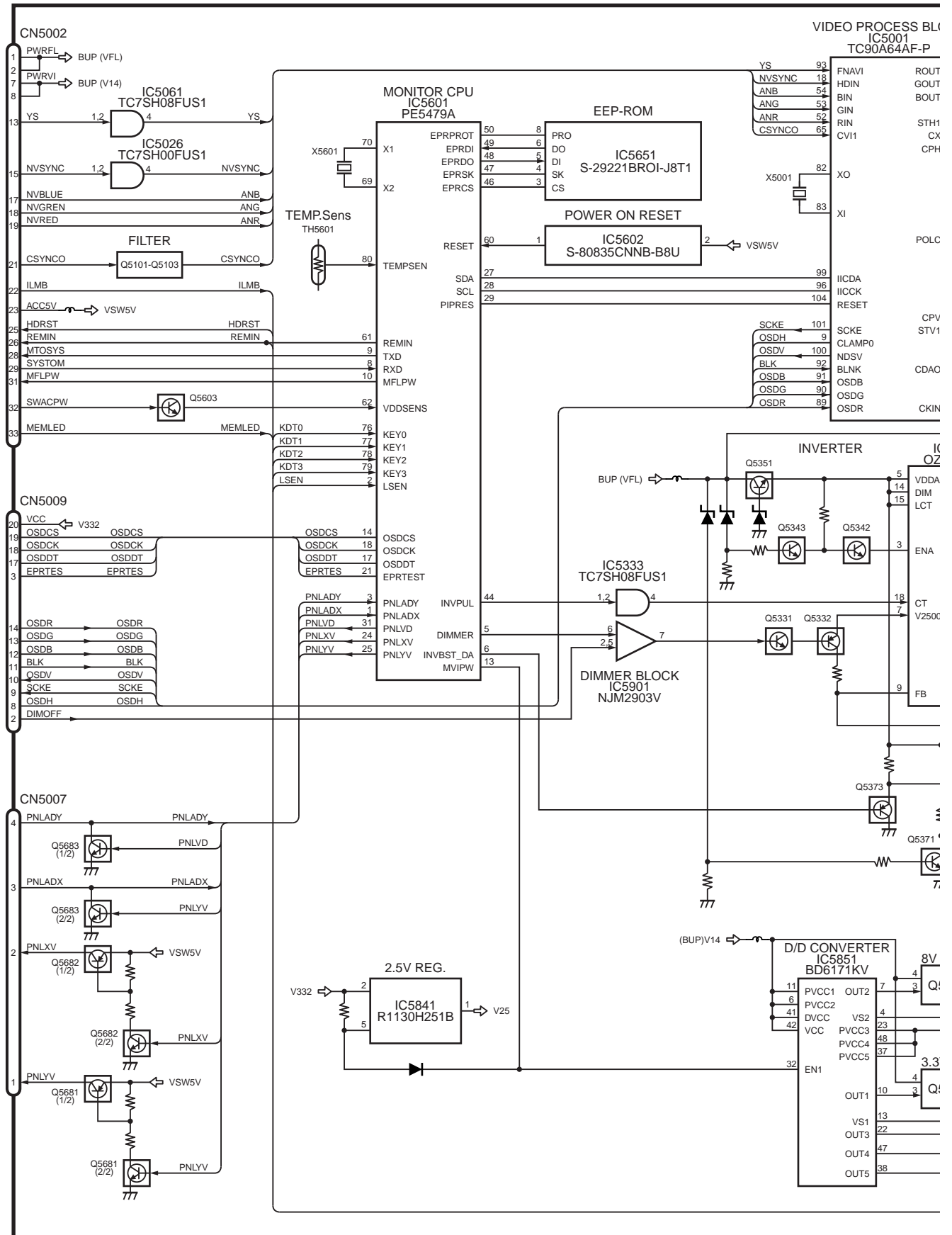




# MONITOR PCB

A  
CN701

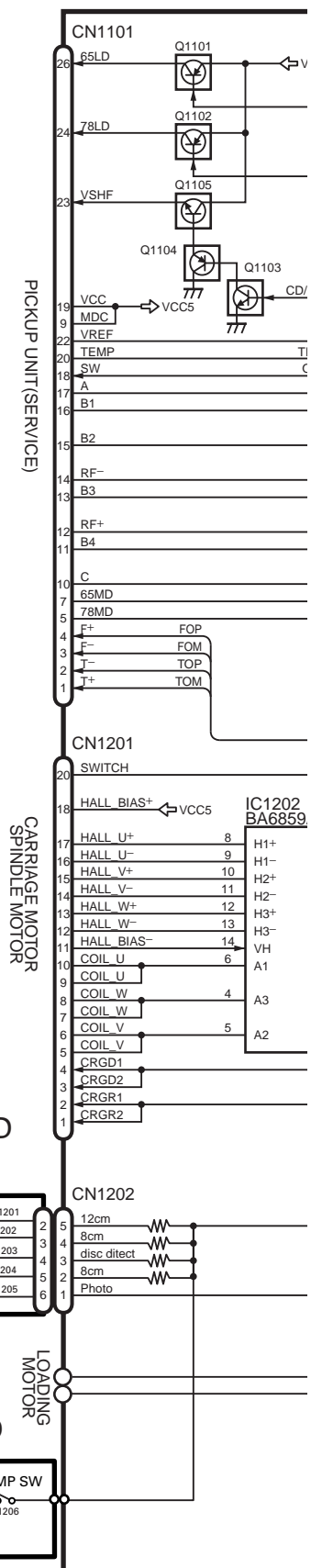
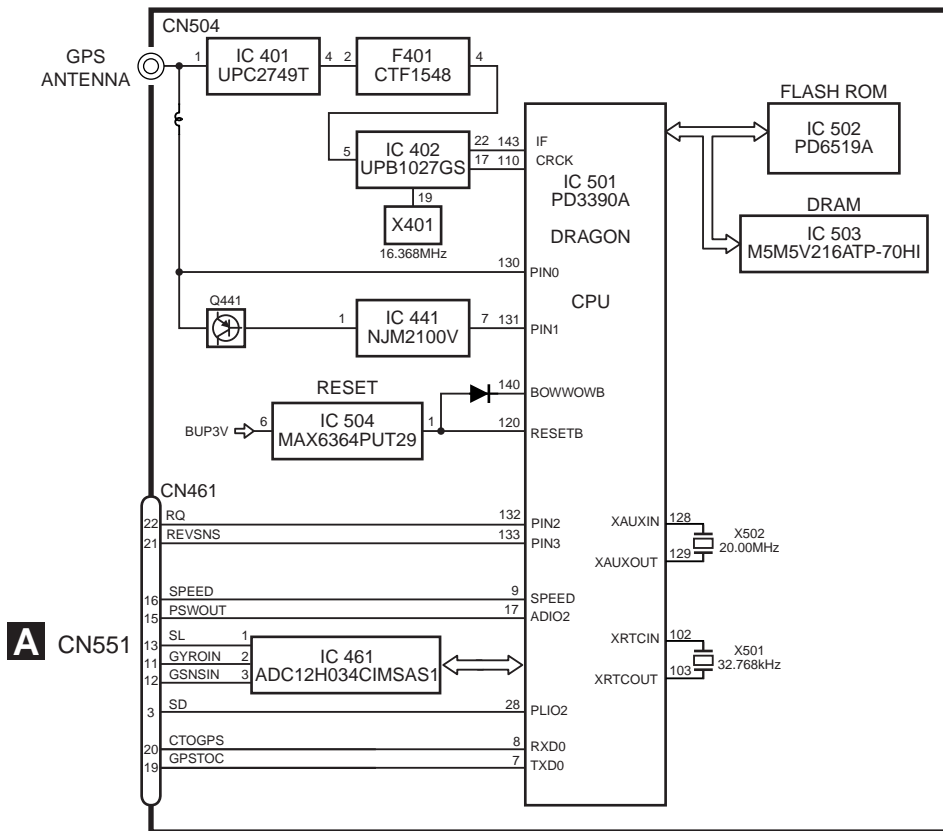
TOUCH PANEL





## B GPS UNIT

## C DVD CORE U

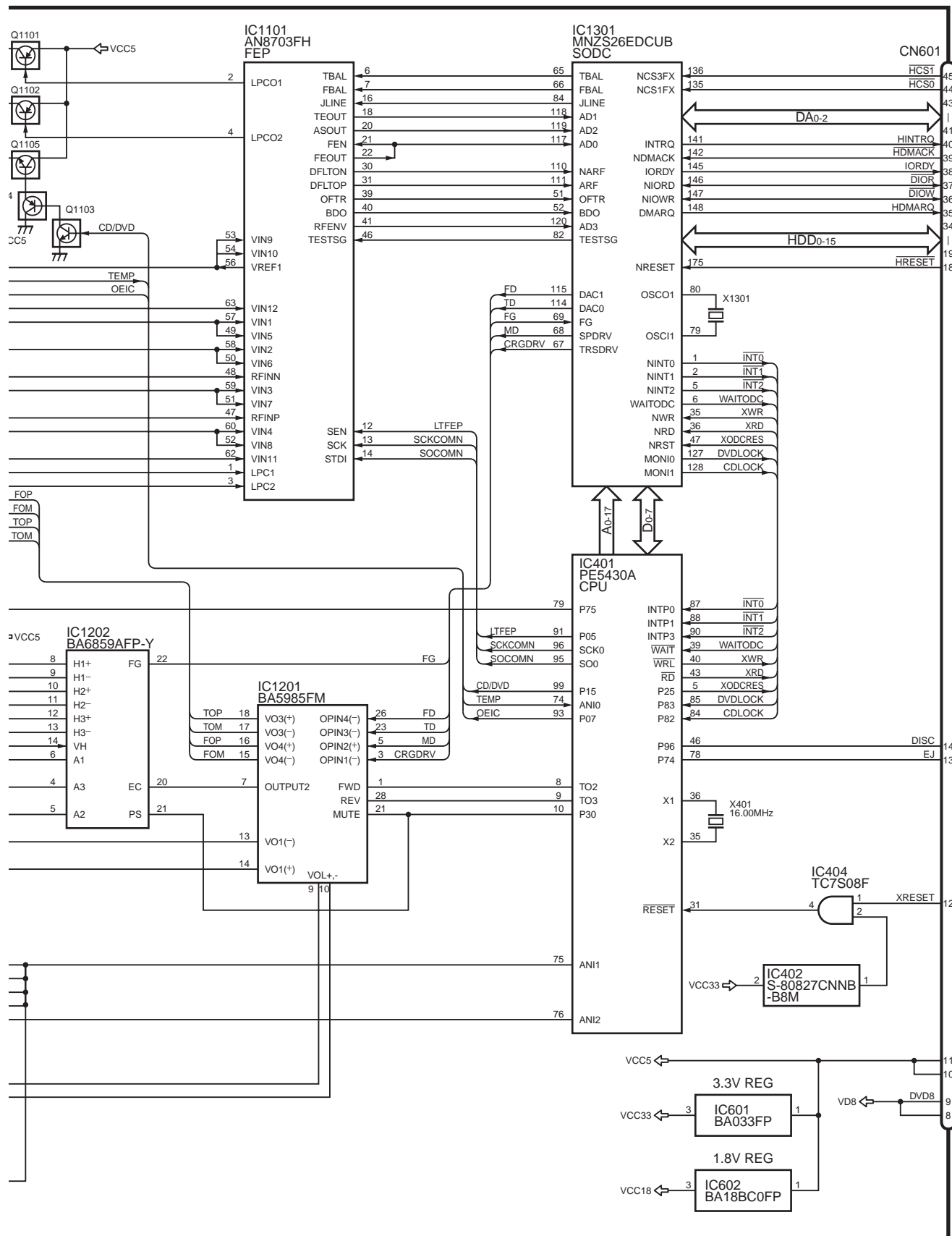


## D COMPOUND UNIT(A)

## E COMPOUND UNIT(B)

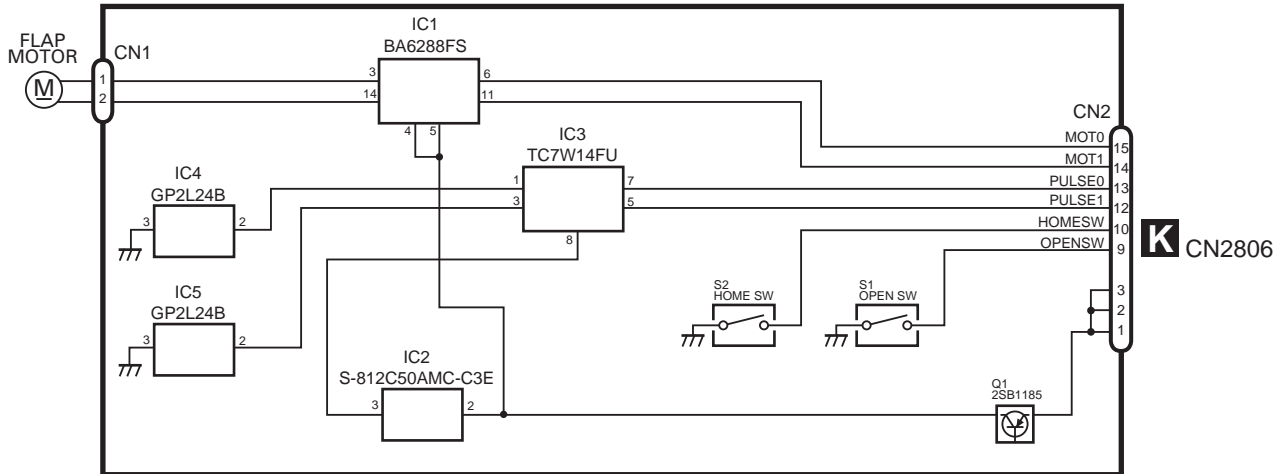


## CORE UNIT



A

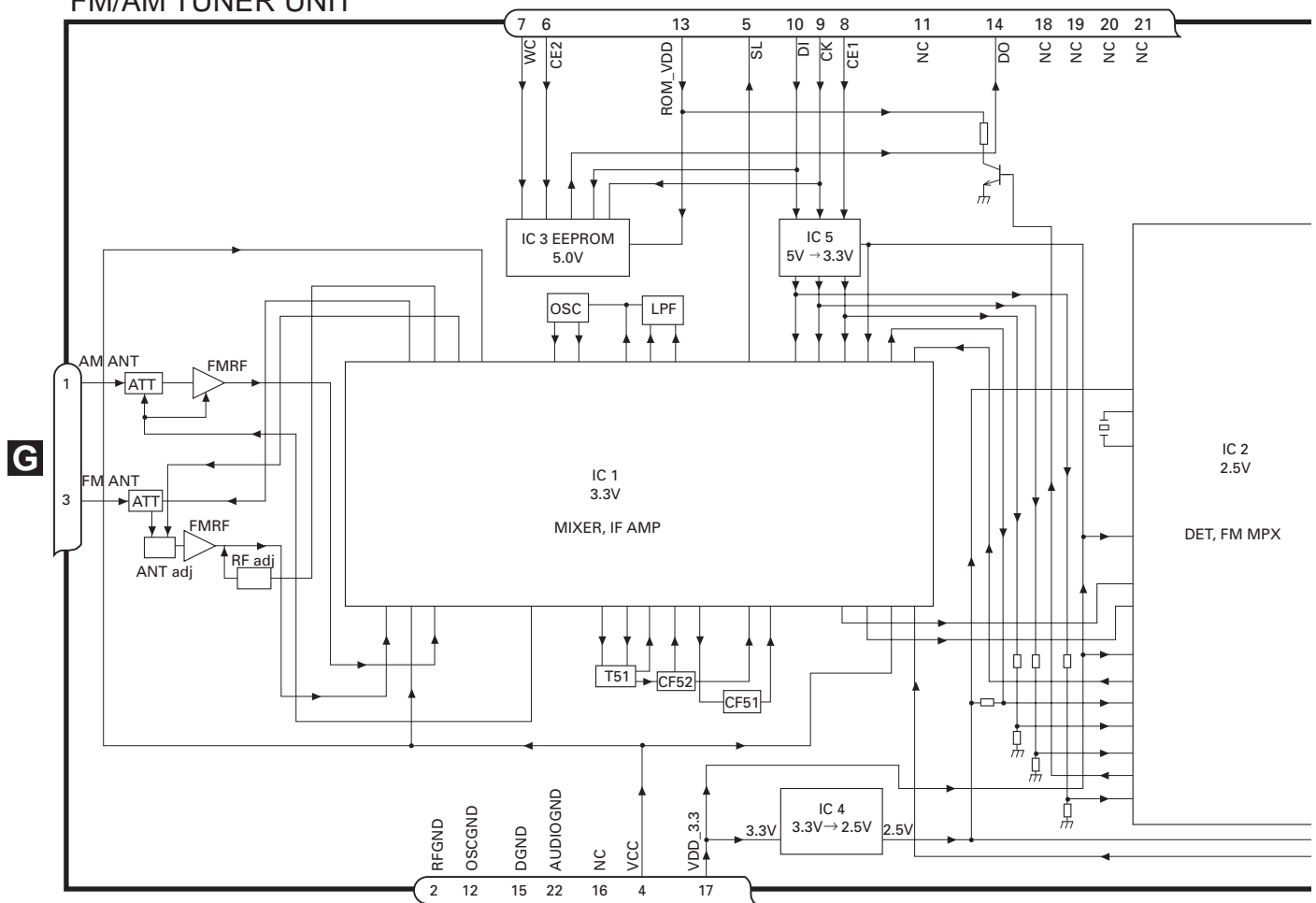
# **L** MAIN PCB UNIT



B

C

## FM/AM TUNER UNIT

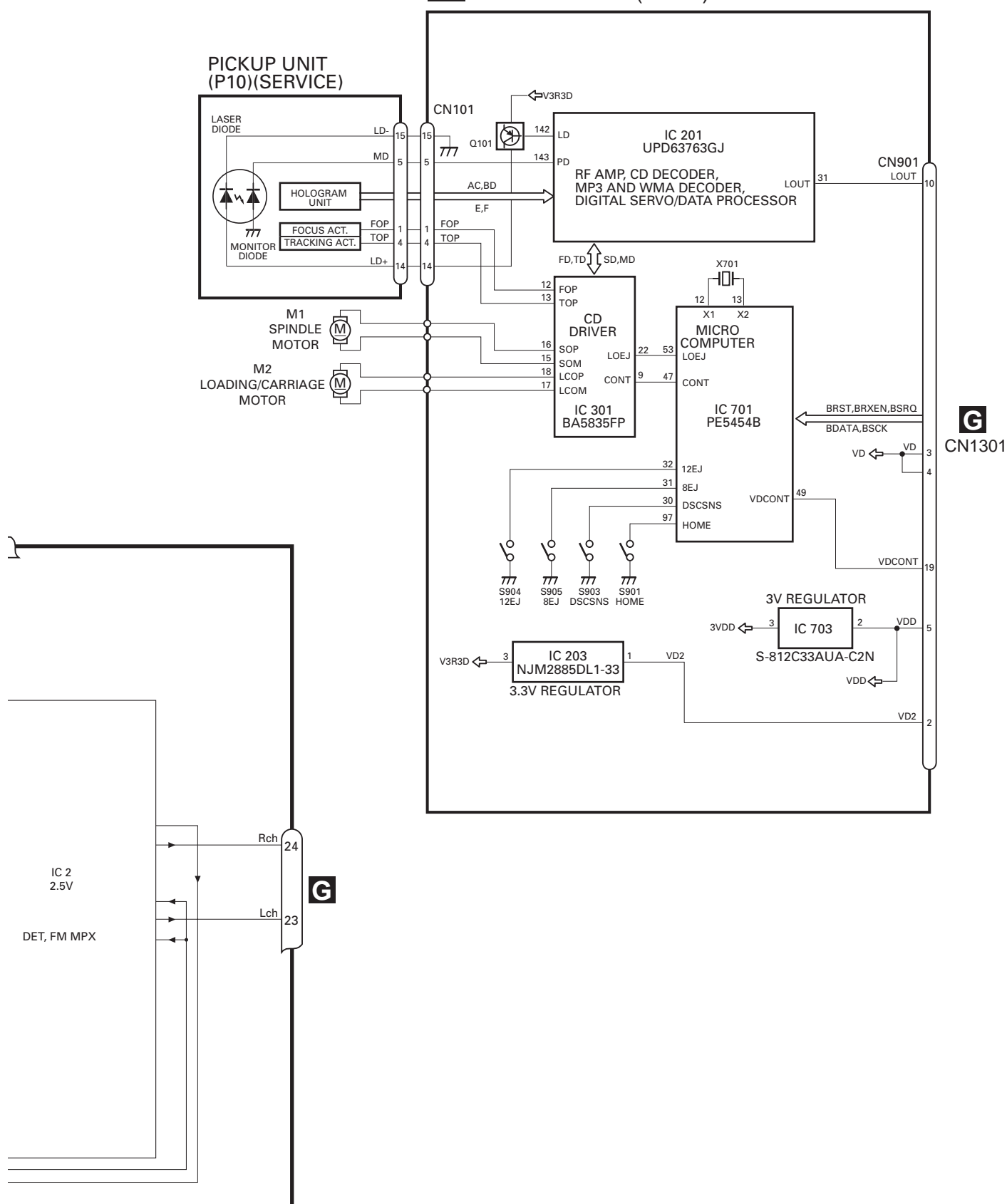
**G**


D

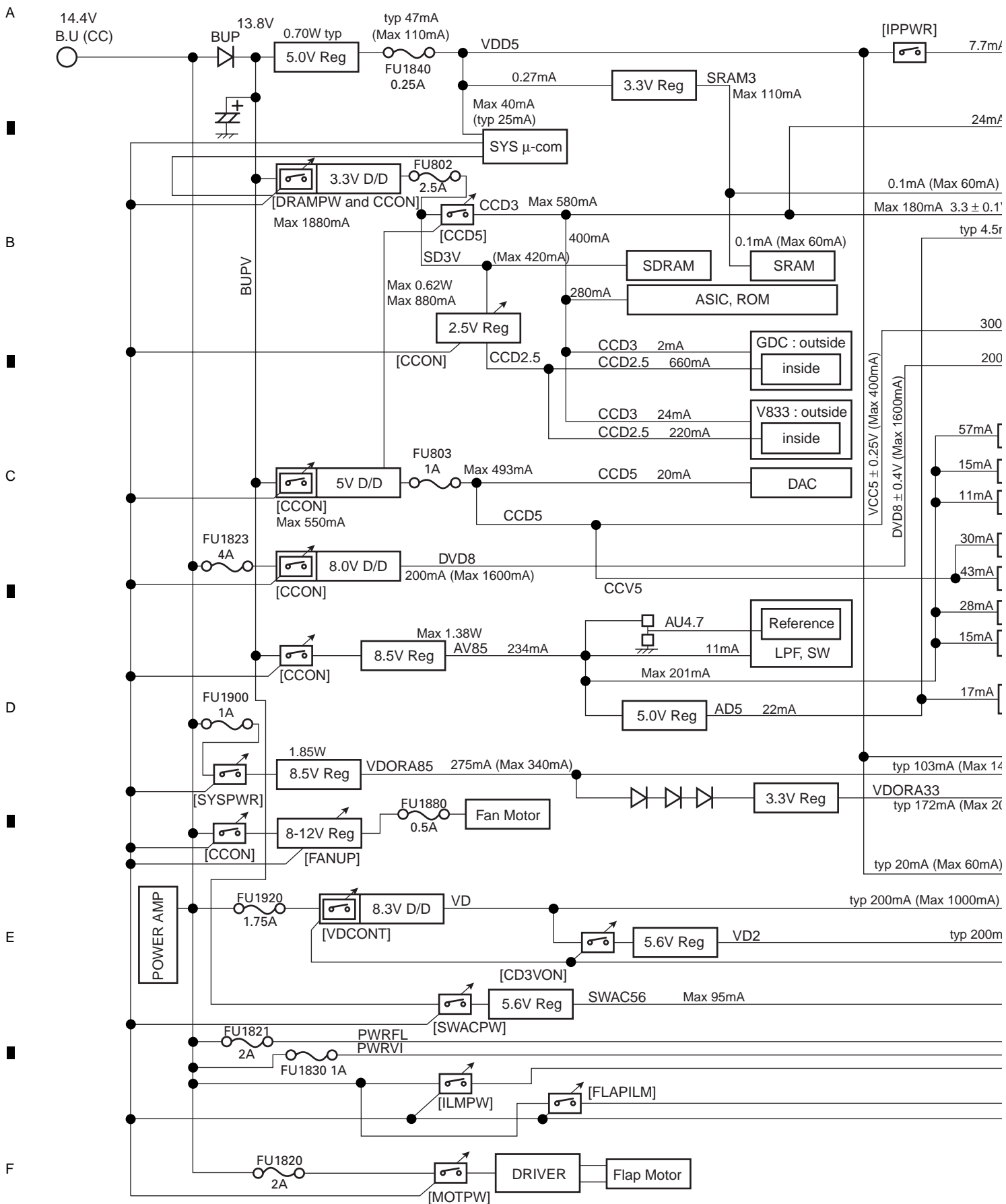
E

F

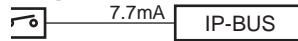
**F** CD CORE UNIT(S10.1)



# Power supply system figure



PWR]



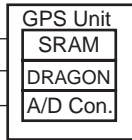
24mA

232C Driver

1mA (Max 60mA)

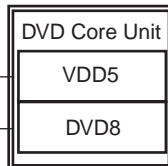
180mA 3.3 ± 0.1V

typ 4.5mA



300mA

200mA



57mA

E. Volume

15mA

IP ISO

11mA

Guide MIX

30mA

75Ω Driver

43mA

NTSC Enc.

28mA

VSEL

15mA

Video ISO

17mA

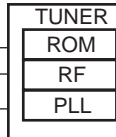
Gyro, G-sensor

2mA

p 103mA (Max 140mA)

RA33

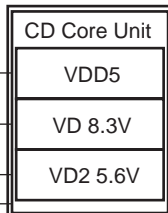
p 172mA (Max 200mA)



0mA (Max 60mA)

A (Max 1000mA)

typ 200mA



Max 45mA

Monitor μ-com

Touch Panel

Remote control sensor

20mA

[MEMOLED]

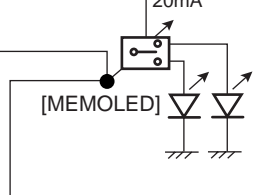
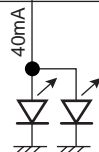
[MFLPW]

[SWACPW]

Back Light

Picture

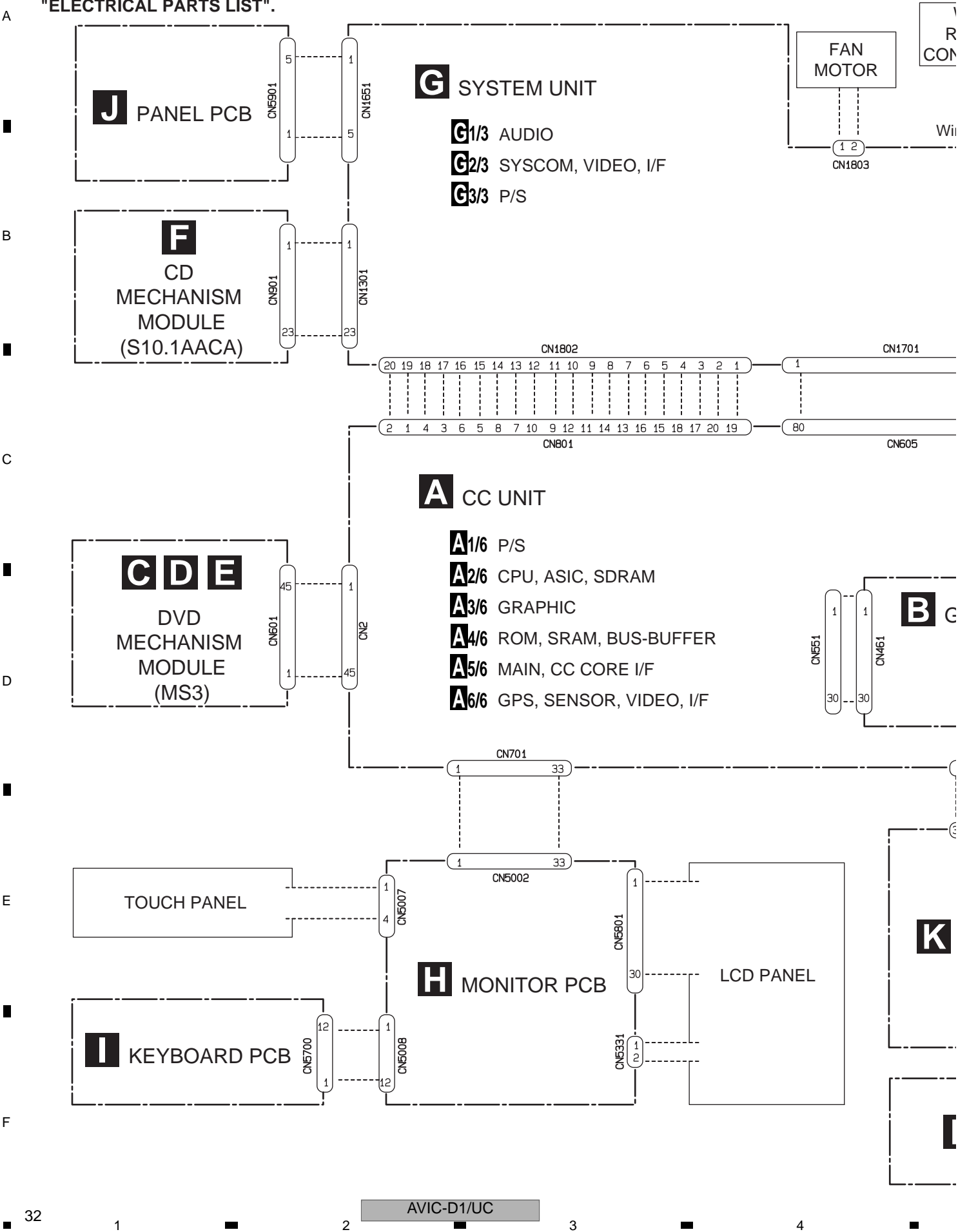
Key LED

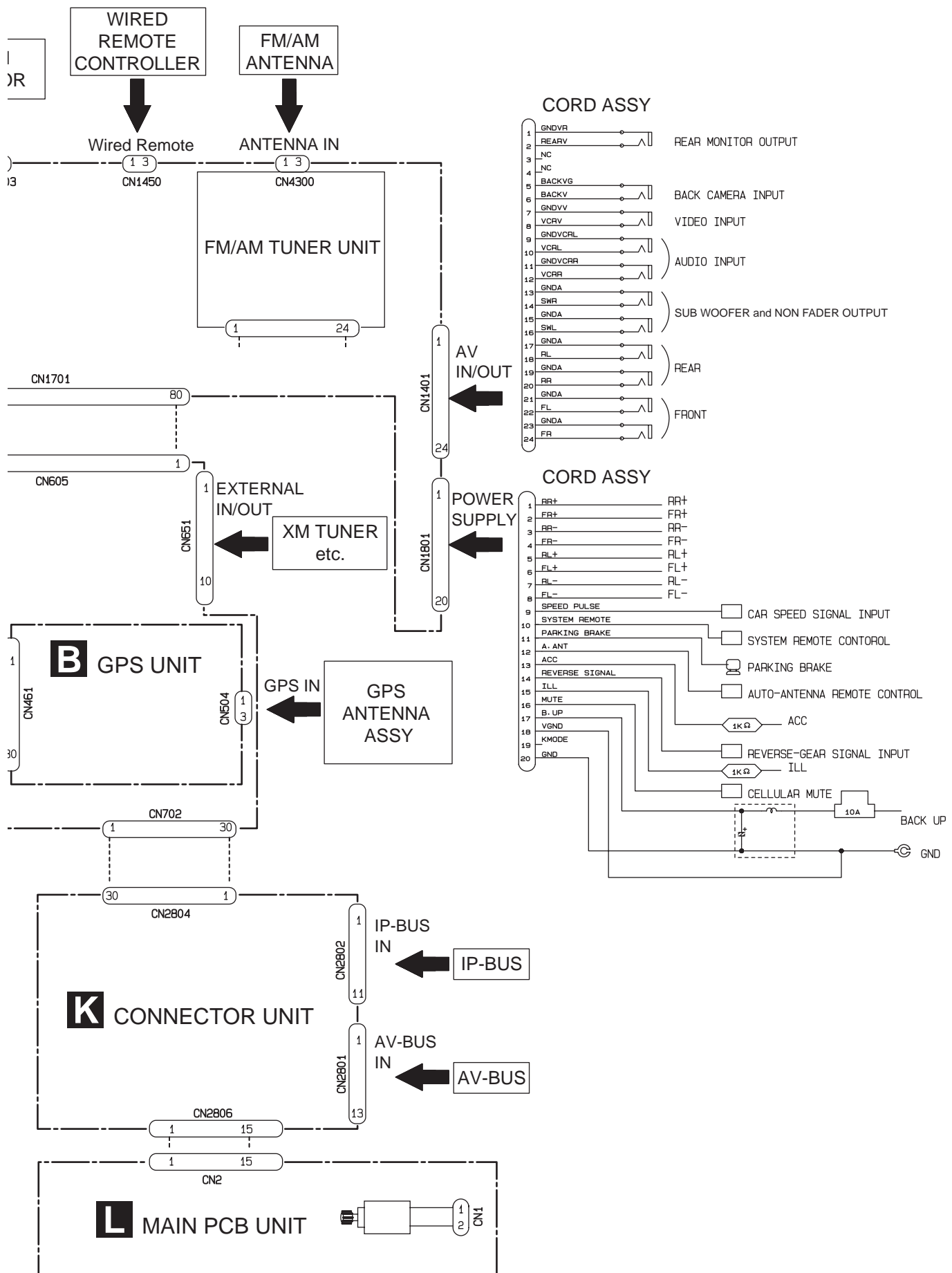


AVIC-D1/UC

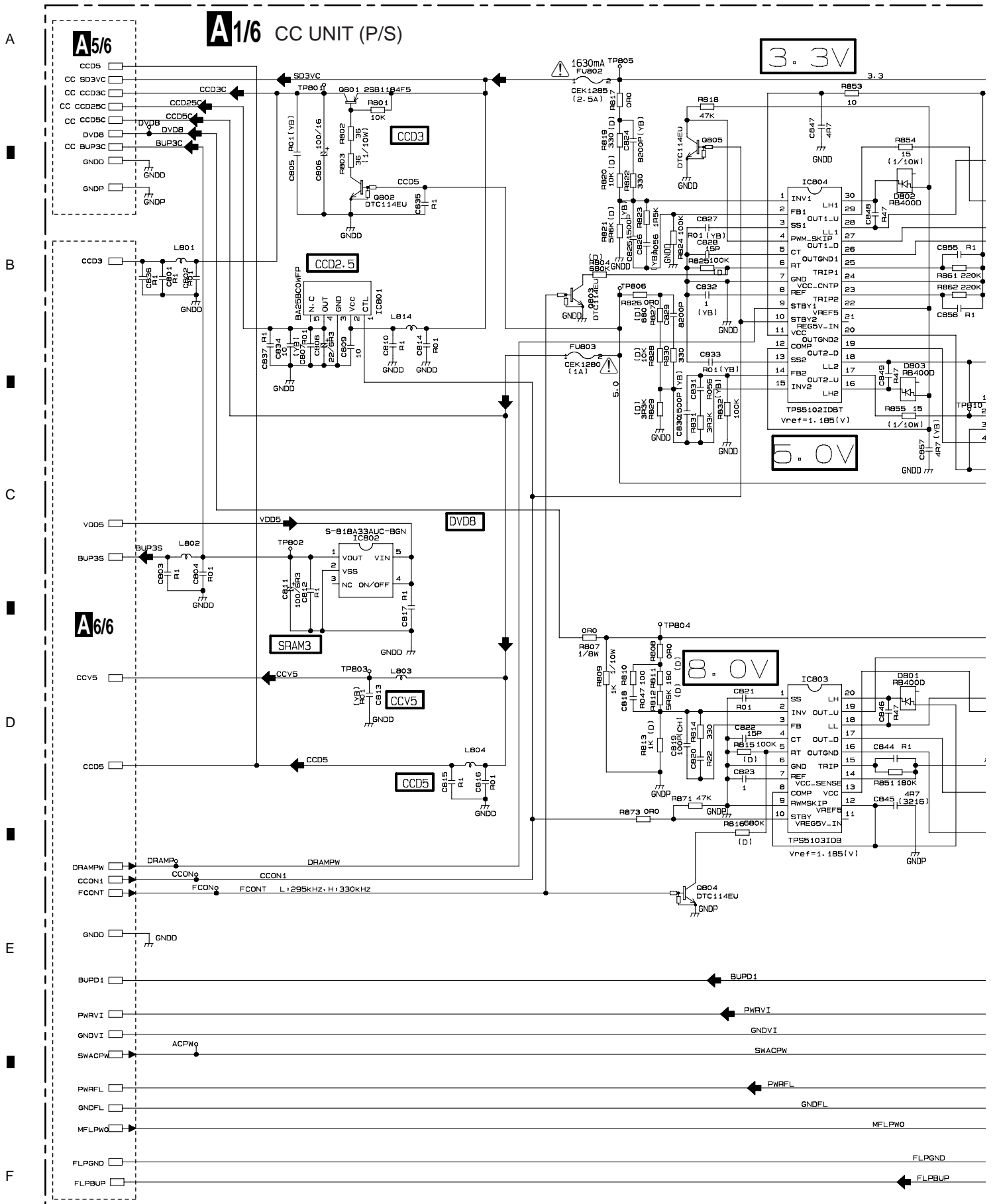
3.2 OVERALL CONNECTION DIAGRAM

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".





### 3.3 CC UNIT (P/S)

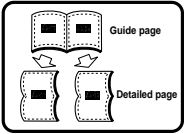
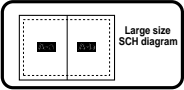






### 3.4 CC UNIT (CPU, ASIC, SDRAM)(GUIDE PAGE)

A



B

C

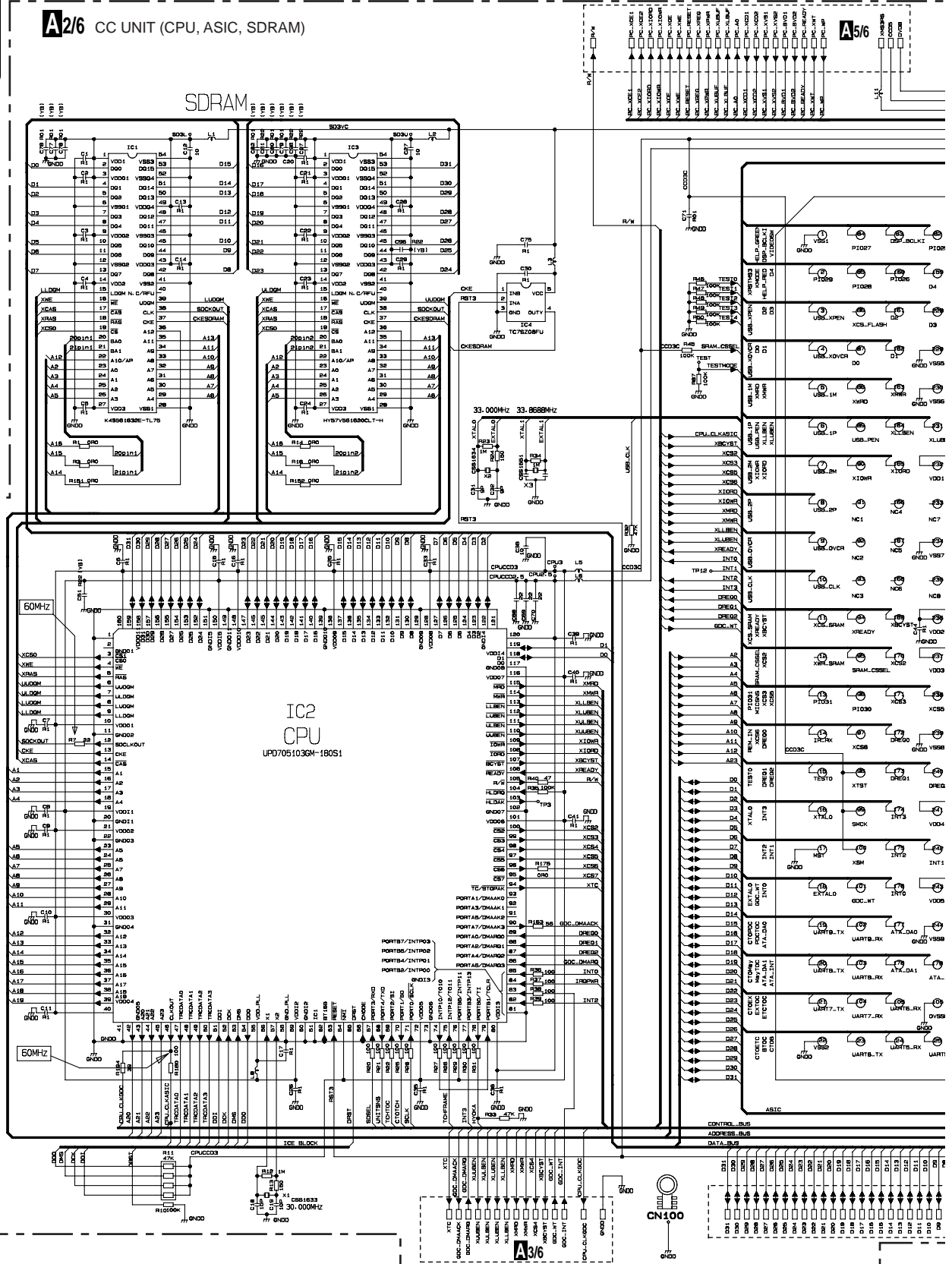
D

E

F

A-a 2/6

A/2/6 CC UNIT (CPU, ASIC, SDRAM)



A/2/6



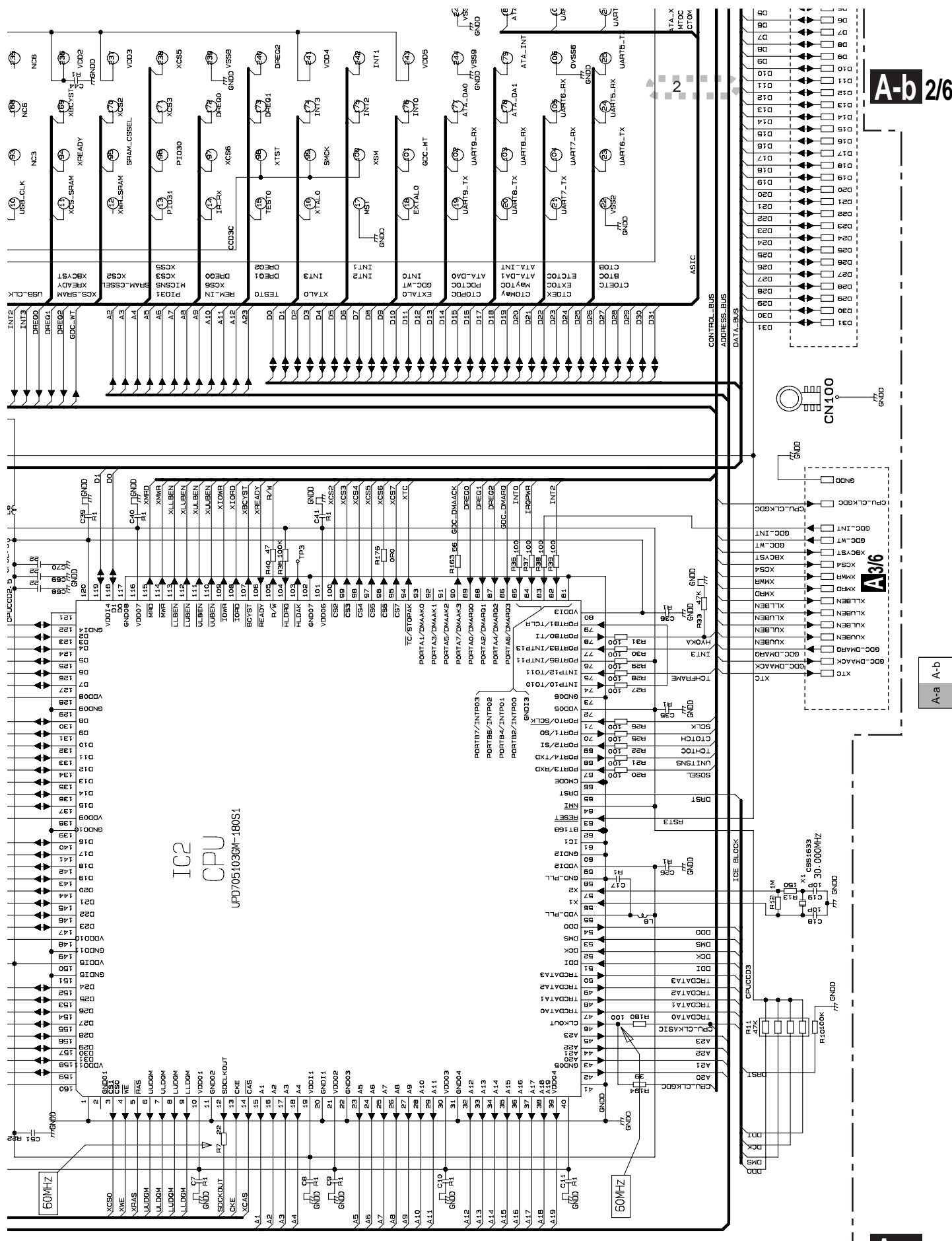
C

D

E

F





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43

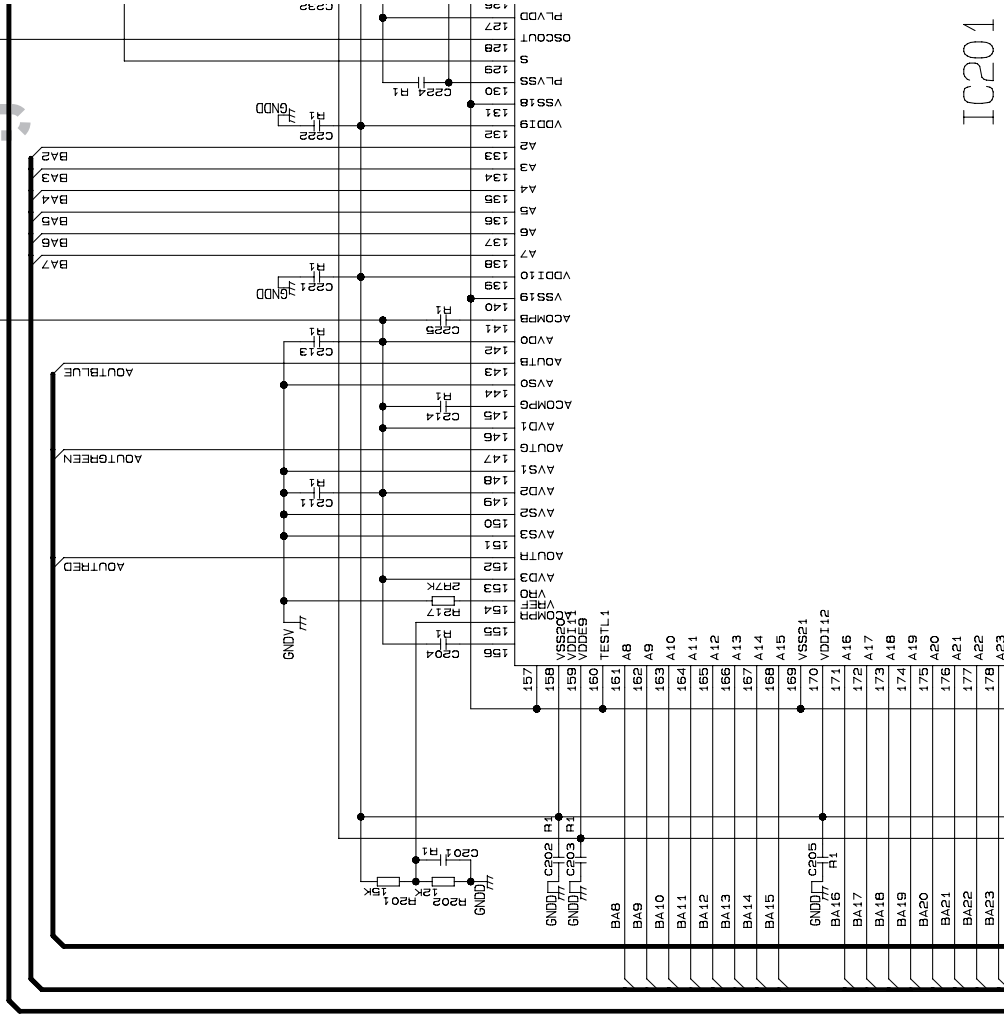
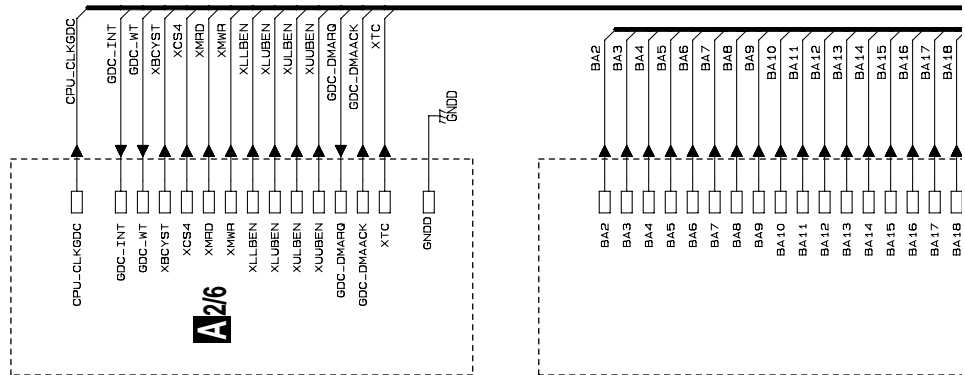
A B C D E F

1 2 3 4

A-a 3/6

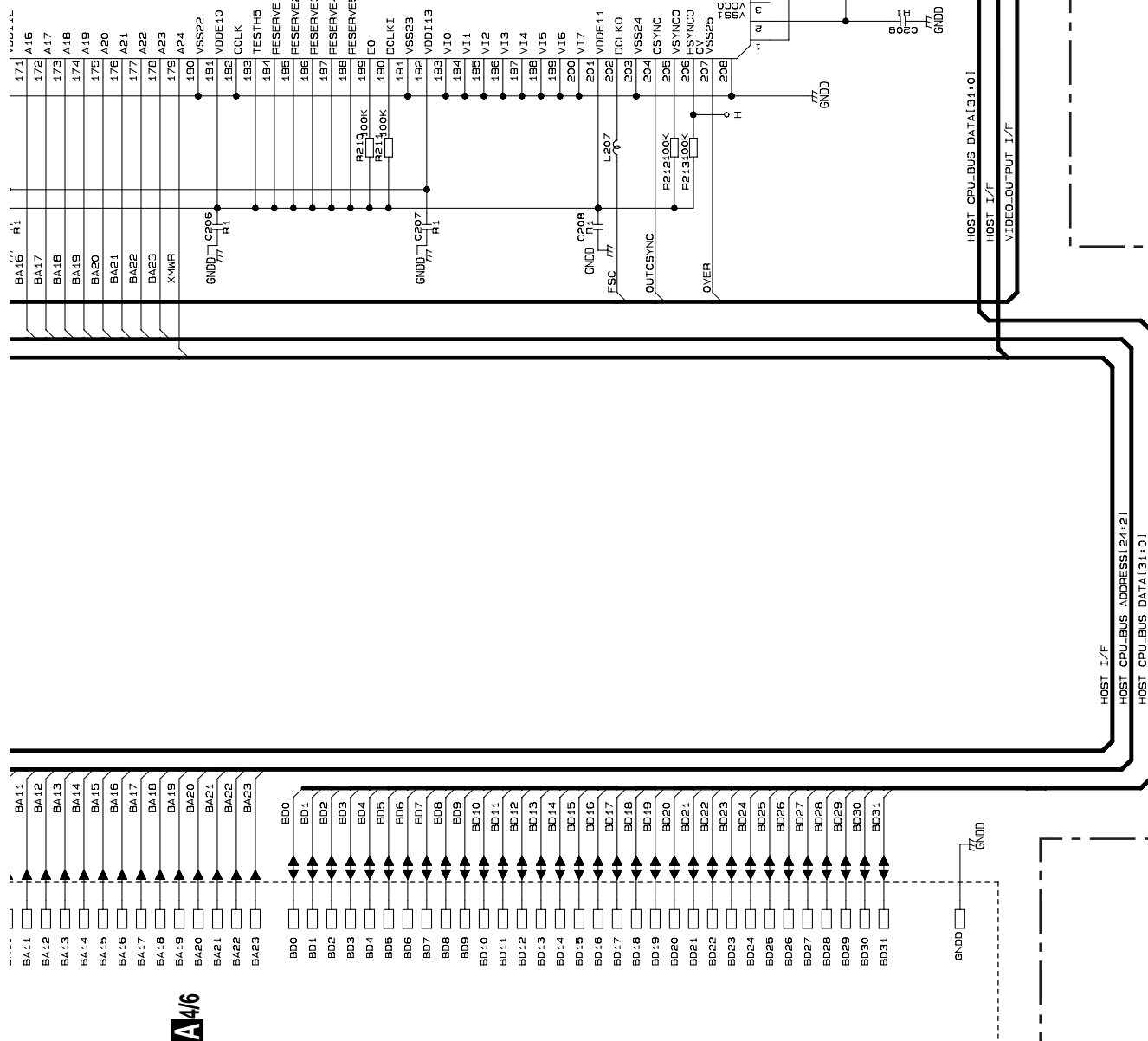
A-b 3/6

A3/6 CC UNIT (GRAPHIC)



IC201

IC201  
MB86291APFV  
SCARLE

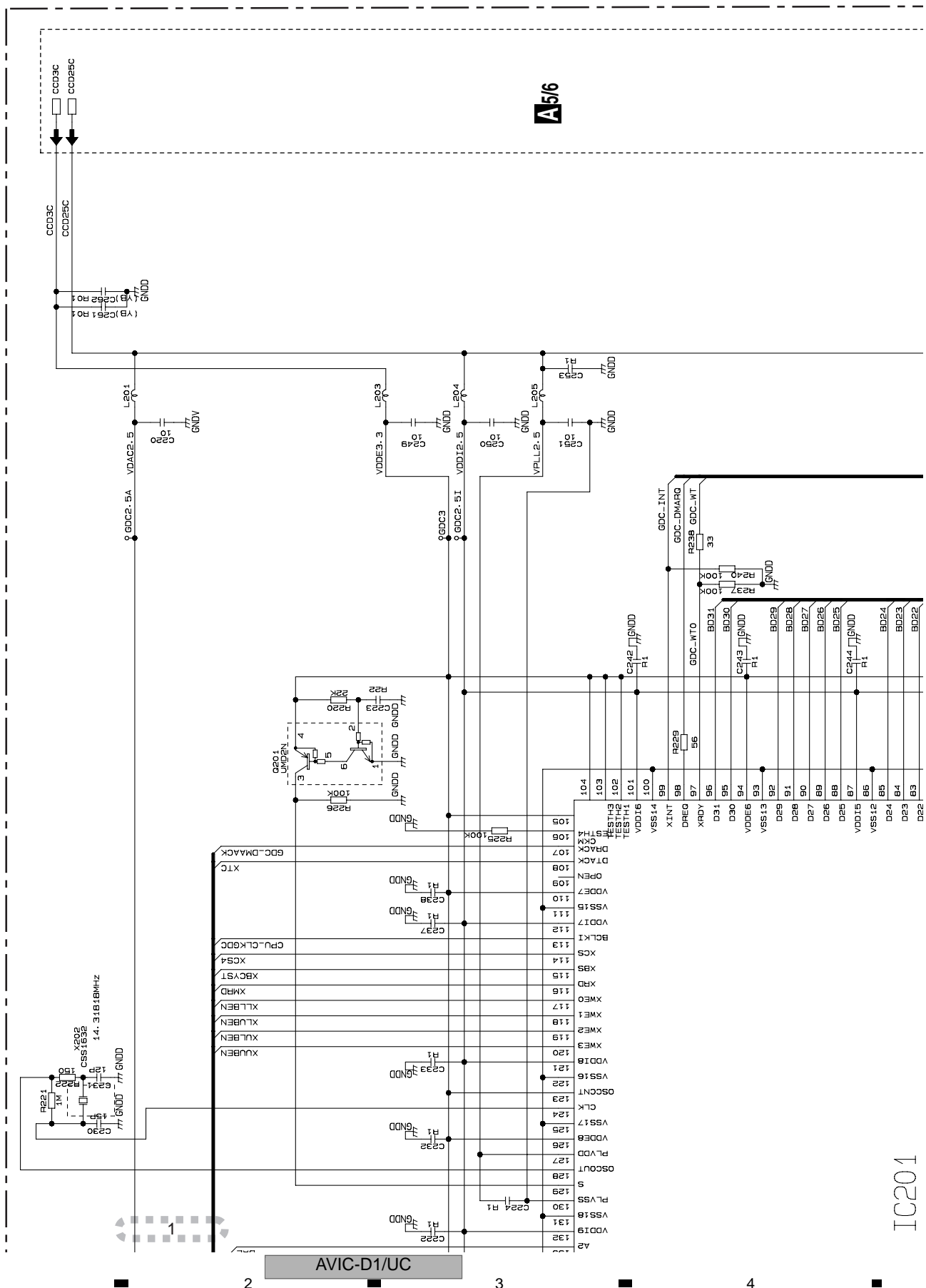


**A-a 3/6**

**A-b 3/6**

AVIC-D1/UC

F



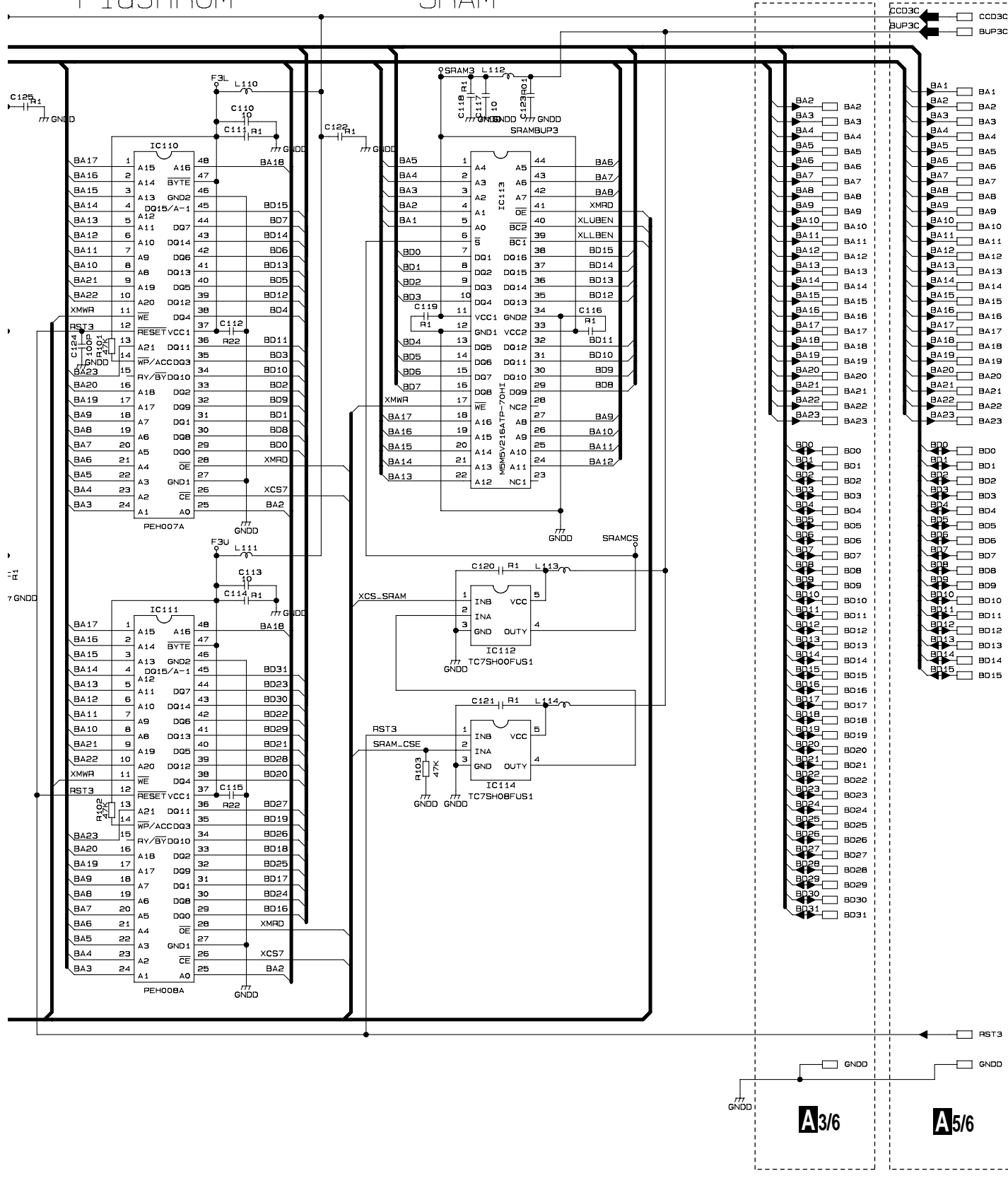


## 4



FlashROM

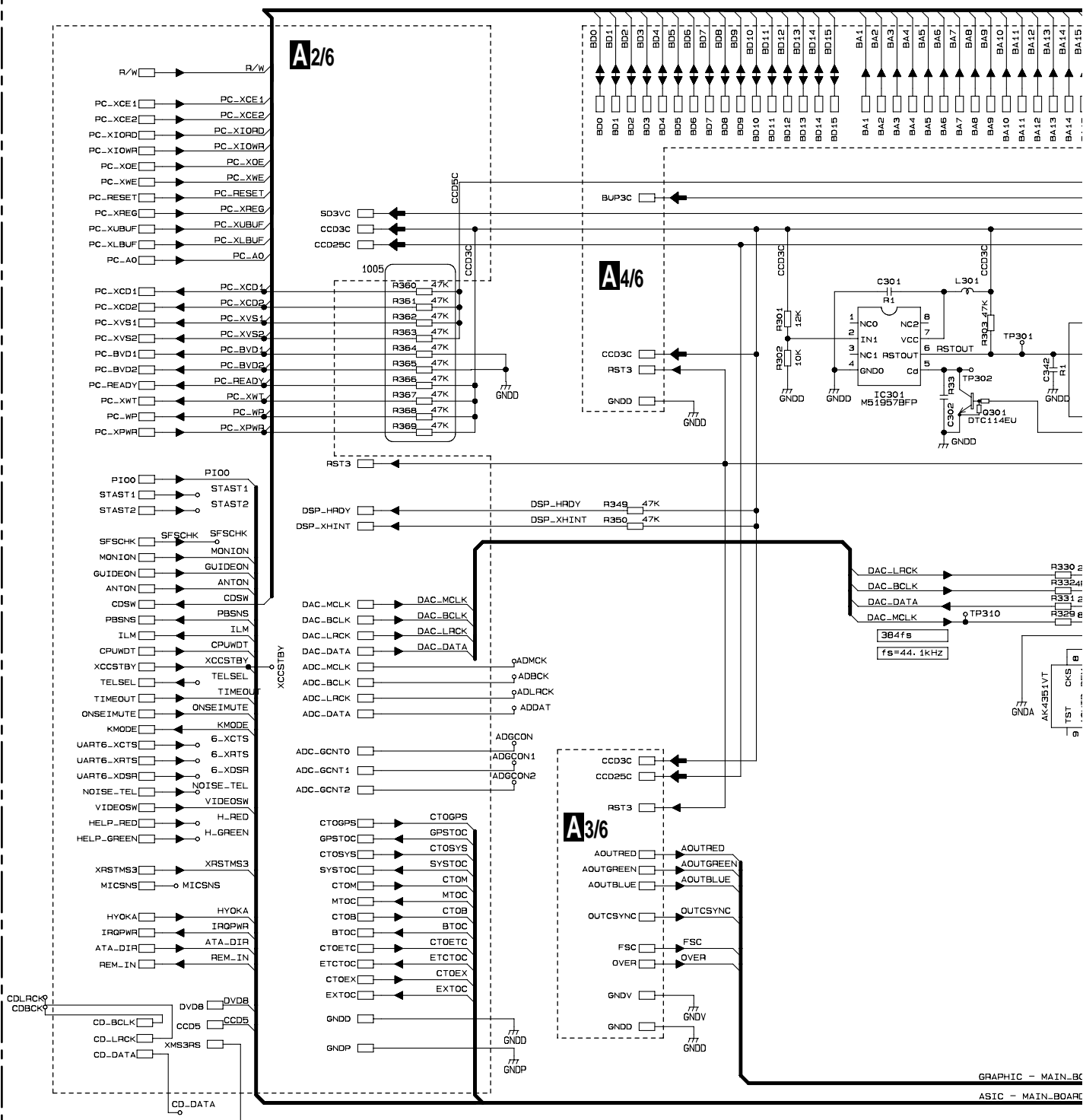
SRAM

**A4/6** CC UNIT (ROM, SRAM, BUS-BUFFER)**A4/6**

# 3.7 CC UNIT (MAIN, CC CORE I/F)

**A5/6** CC UNIT (MAIN, CC CORE I/F)

**A** AUDIO SIGNAL



**A5/6**

AVIC-D1/UC





## 4

A

**B**

C

D

F

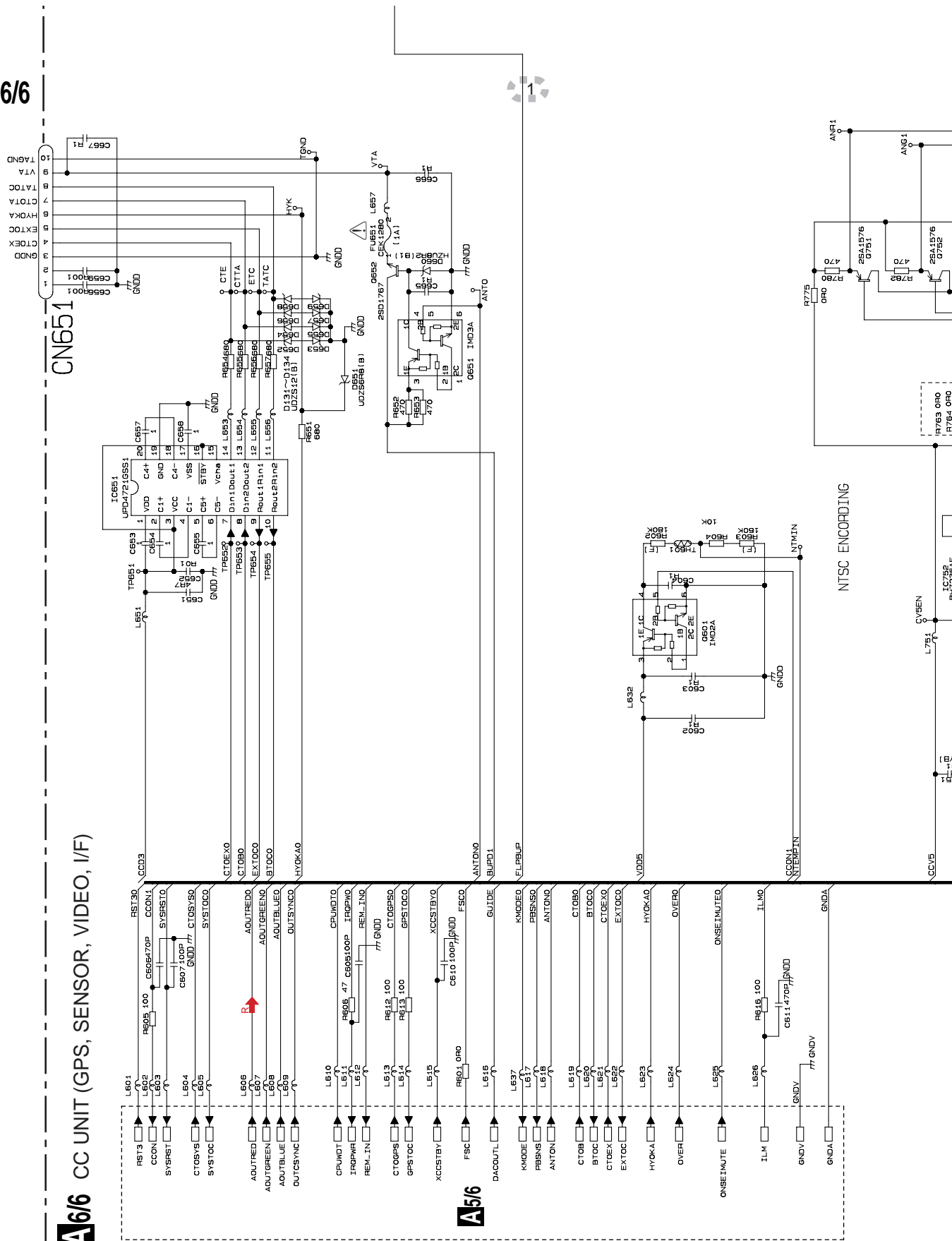
F

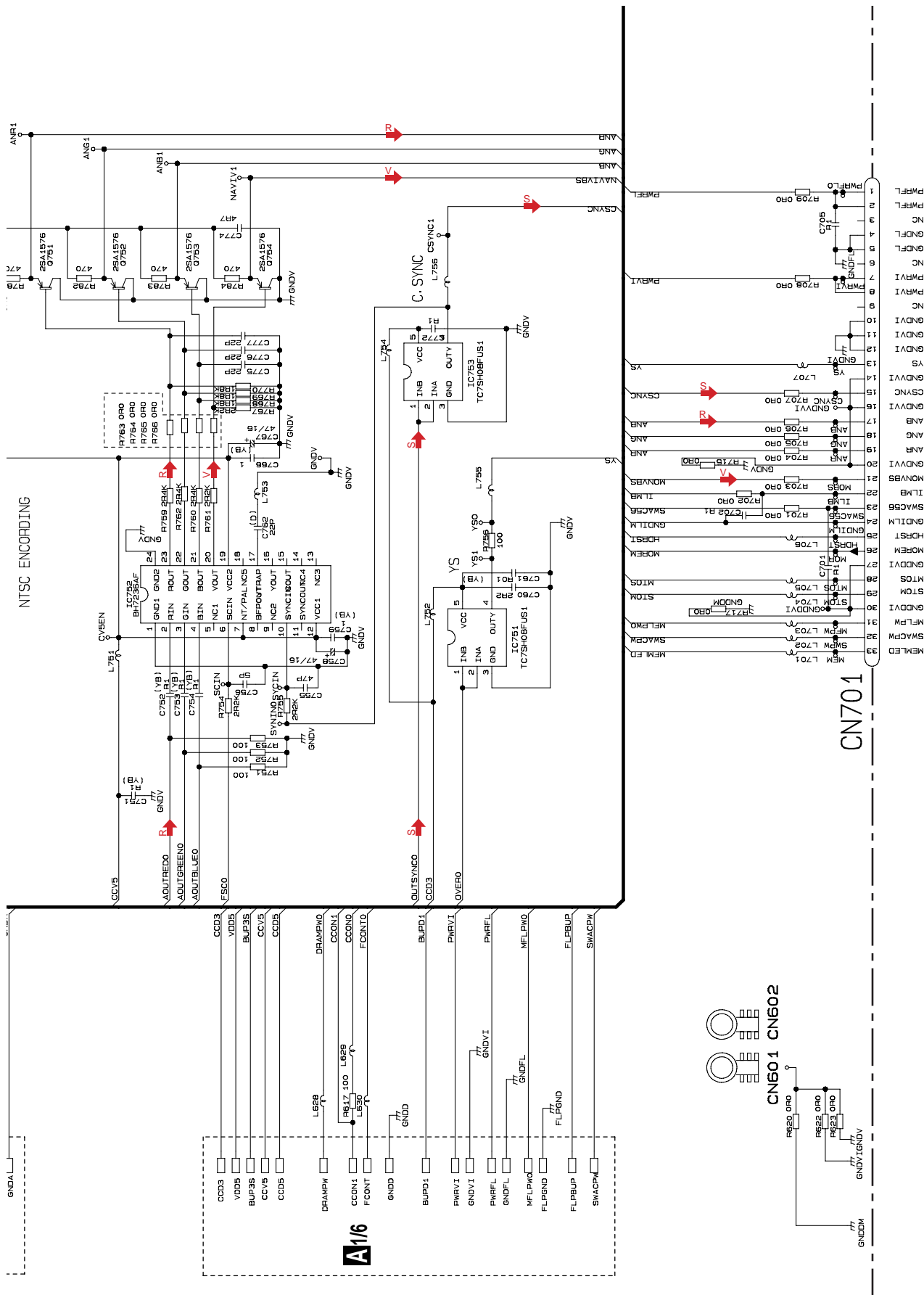




**A-b 6/6**

**A 5/6**





A-b 6/6

H CN5002

CN701

CN601 CN602

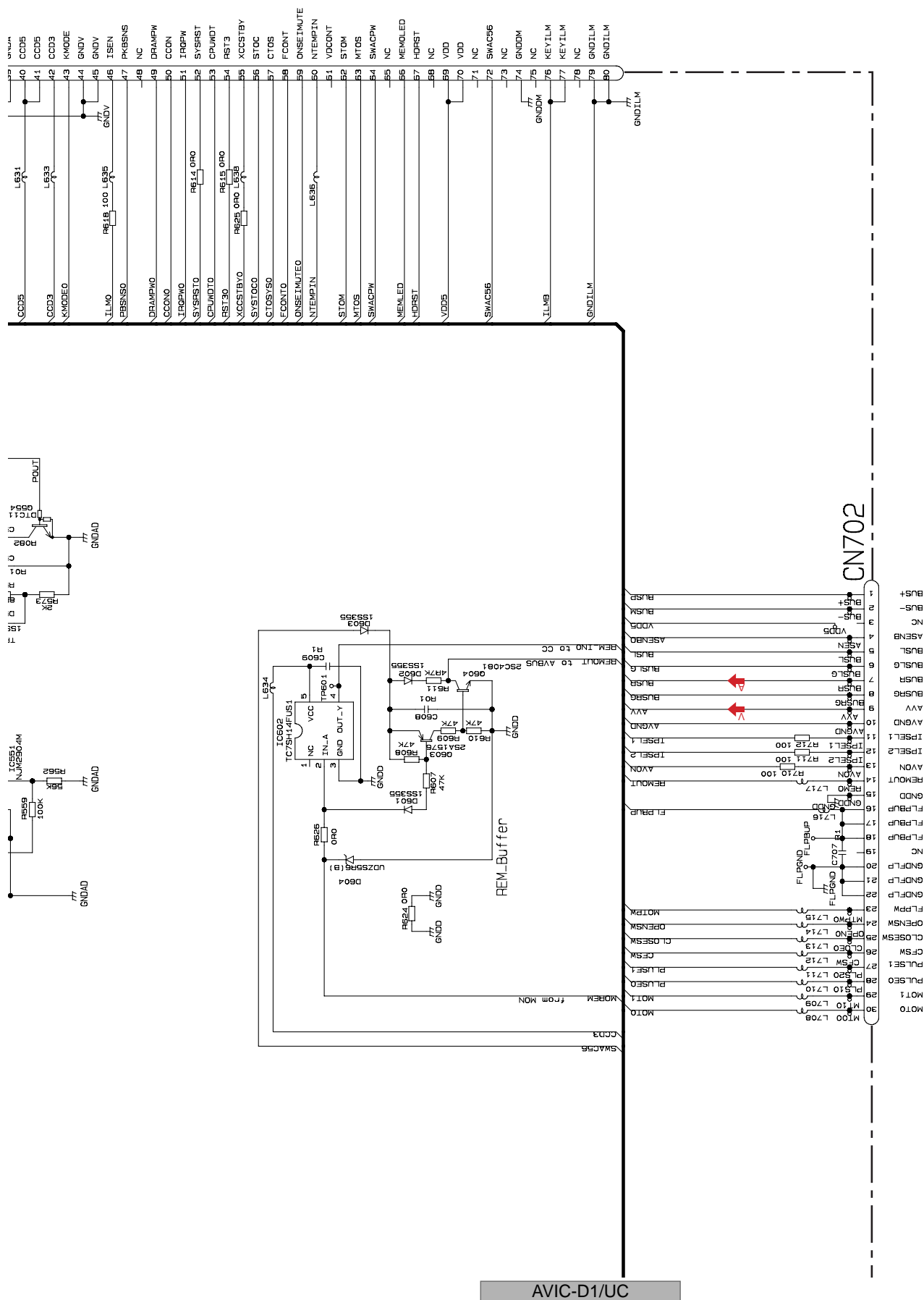
A-a A-b

F



CN1701



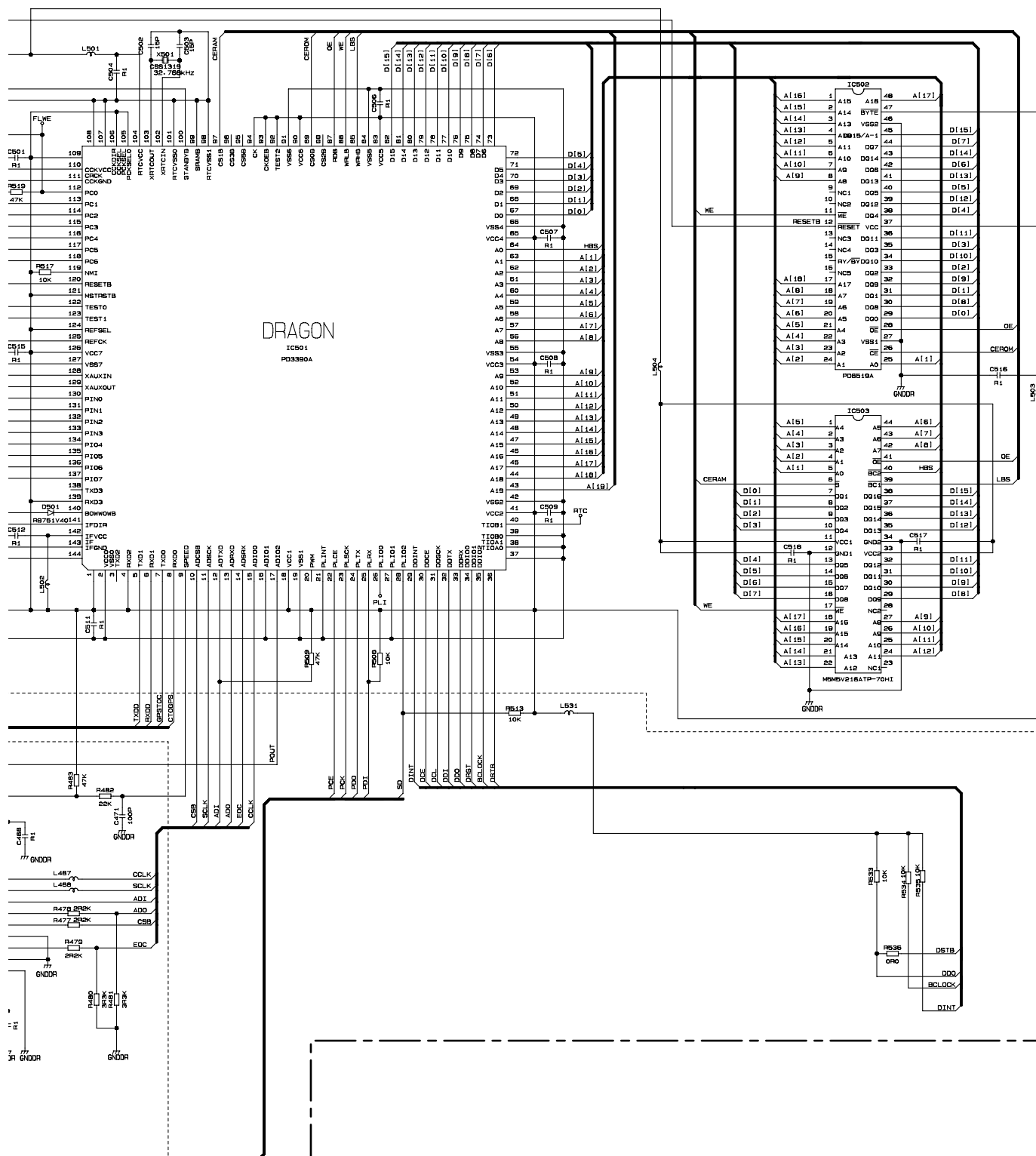


## F





**B** GPS UNIT



F

B-a B-b



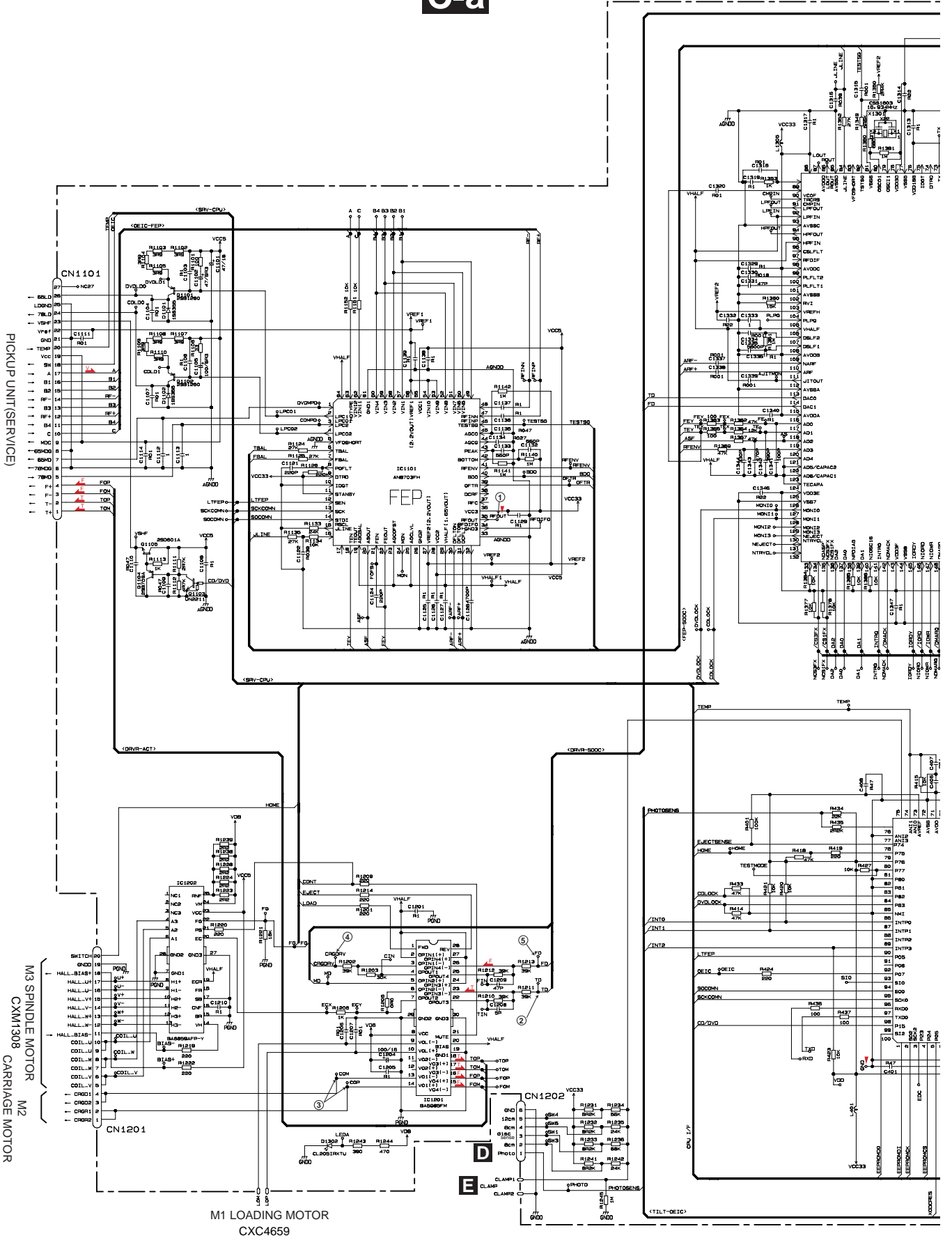


B GPS UNIT



# 3.10 DVD CORE UNIT(MS3R)(GUIDE PAGE)

C-a





F

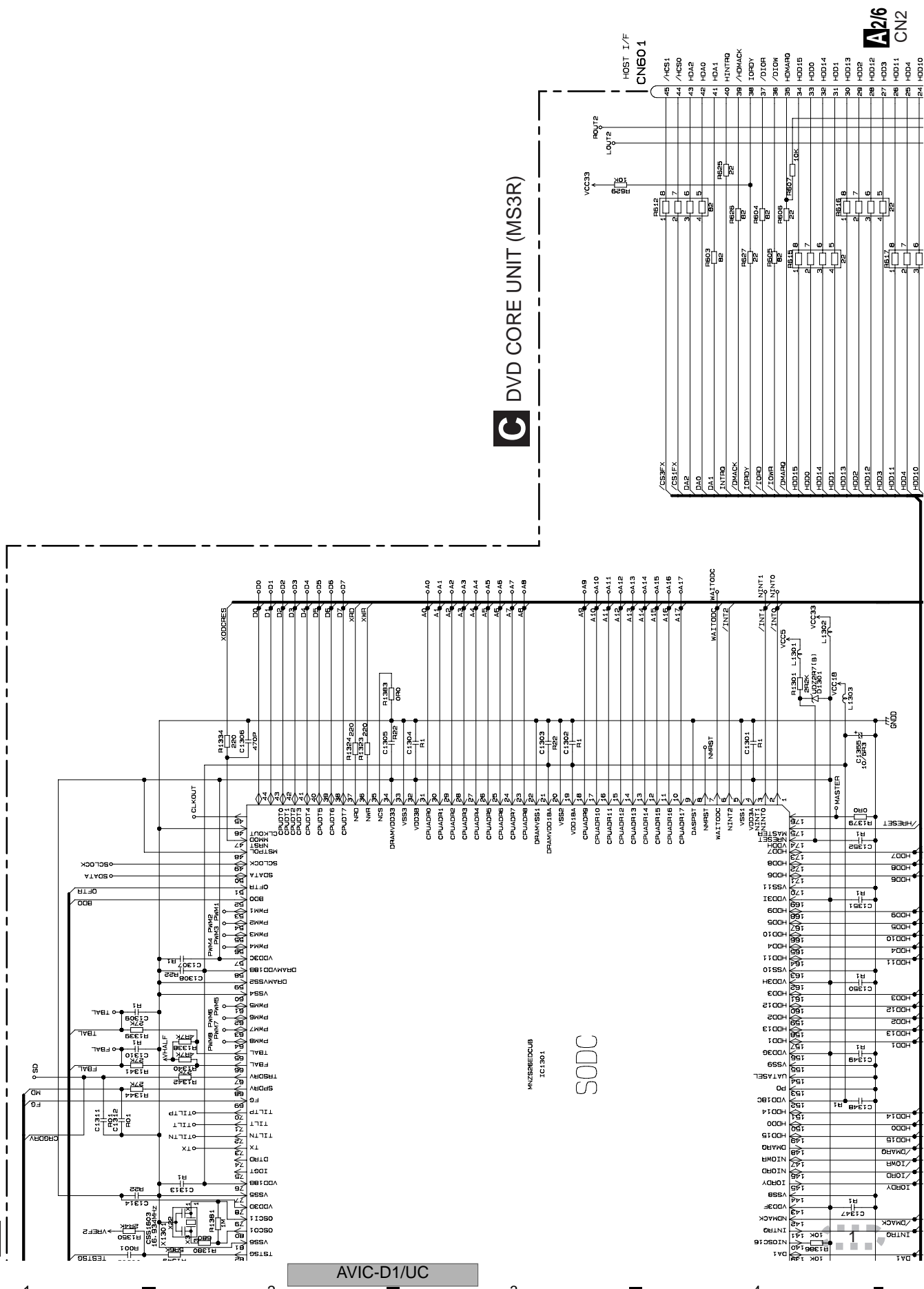
C-a C-b

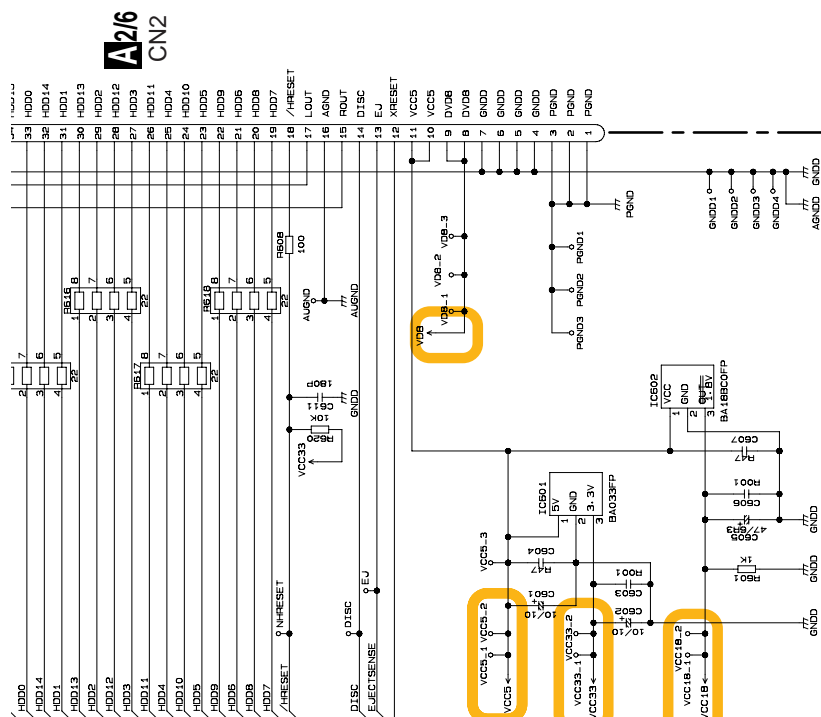


**C-a**

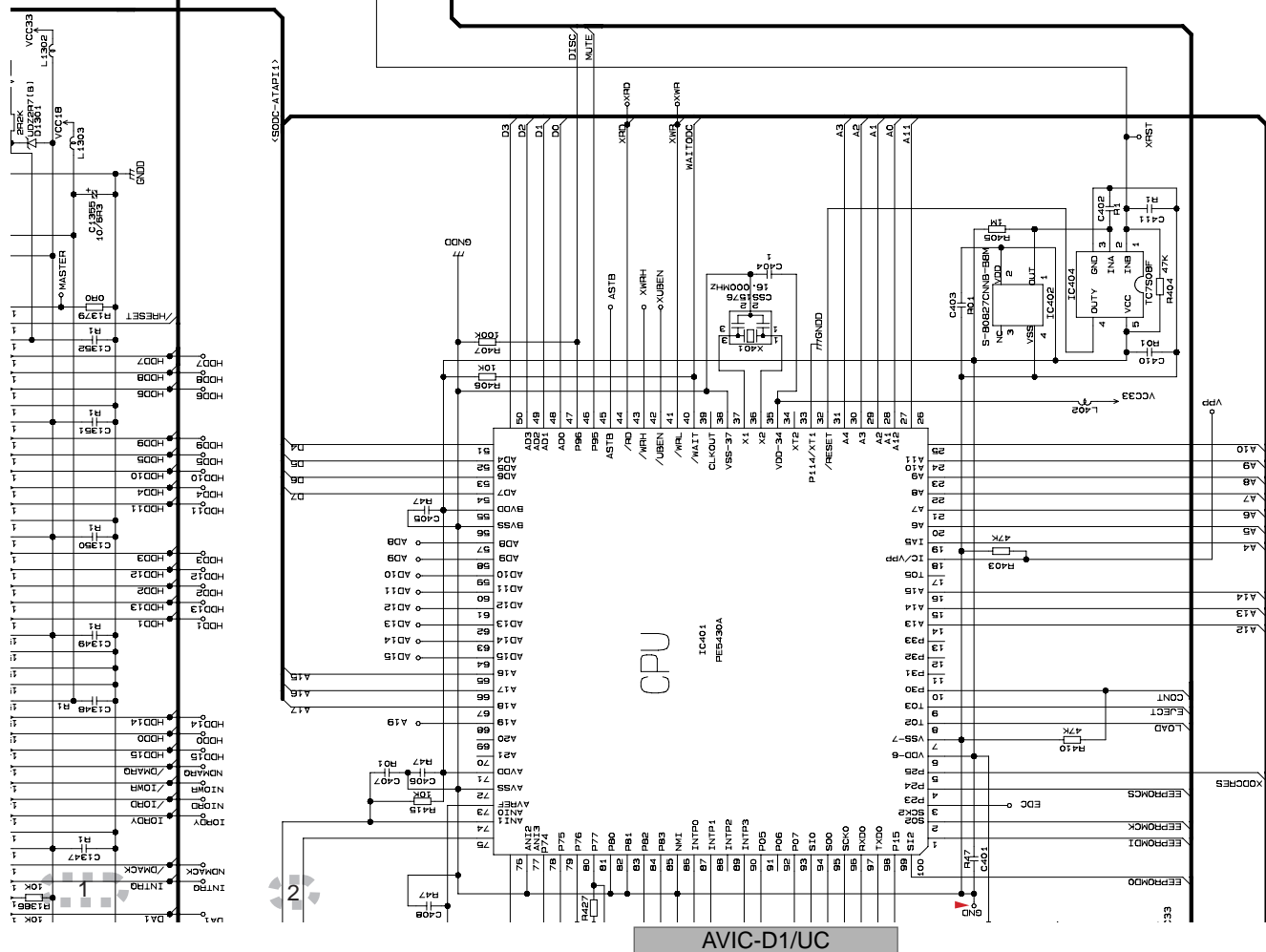








: The power supply is shown with the marked box.



# Waveforms

Note:1. The encircled number denote measuring points in the circuit diagram.

2. Reference voltage VHALF : 1.65V(TD1,FD1,CRGDRV)

: 2V Center(ANAMONI1)

In this waveform, it is seeing on the GND standard.

Offset of 1.65V or 2V is put in.

A

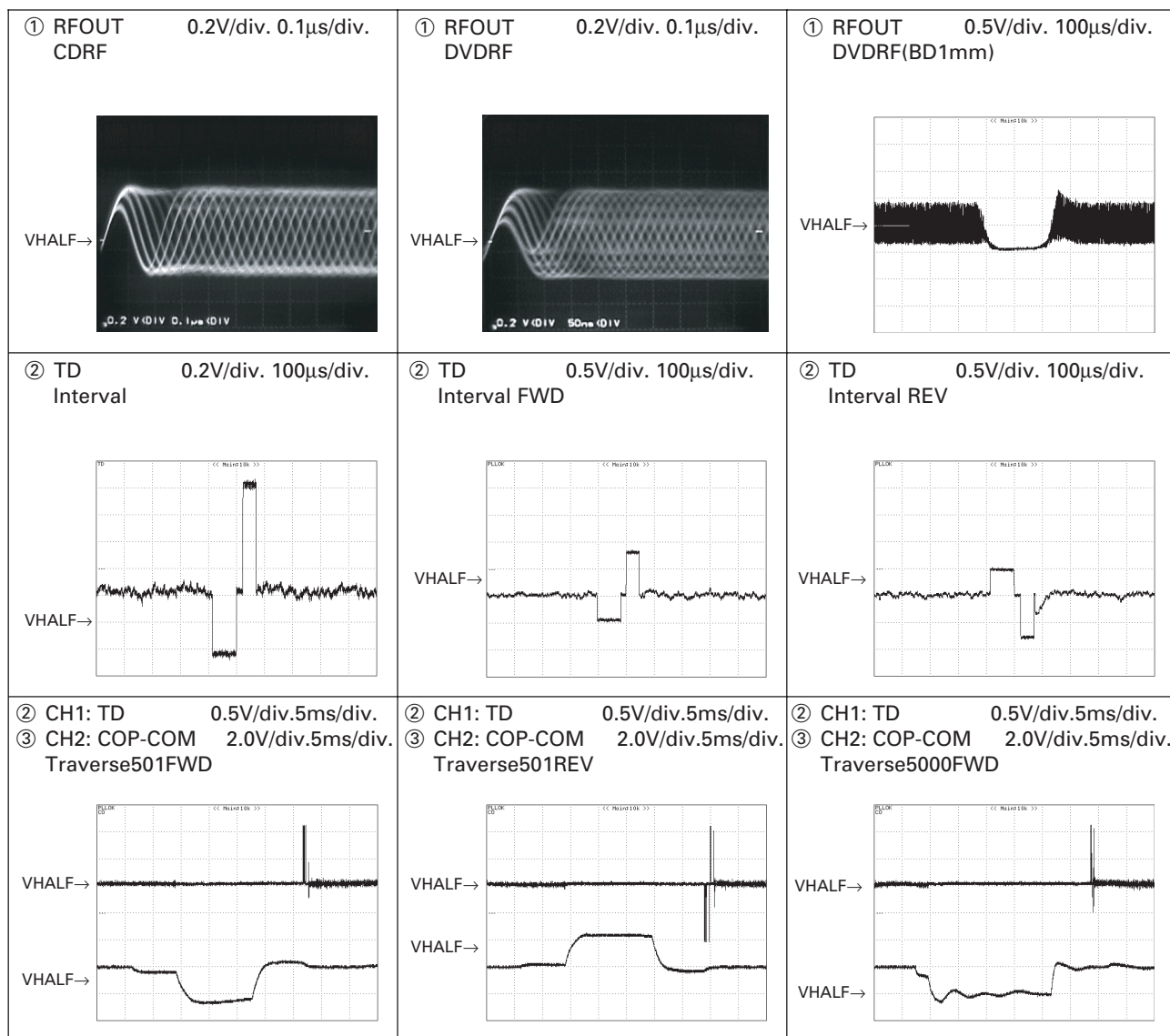
B

C

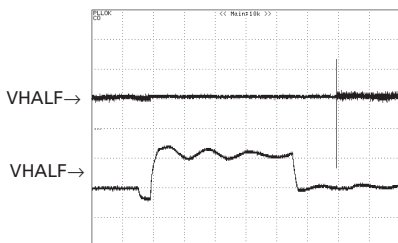
D

E

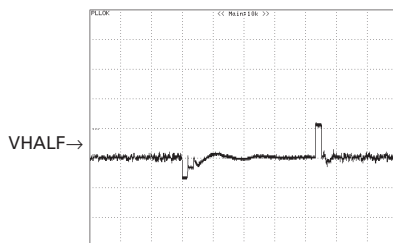
F



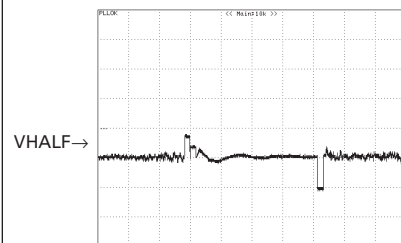
② CH1: TD 0.5V/div.5ms/div.  
③ CH2: COP-COM 2.0V/div.5ms/div.  
Traverse5000REV



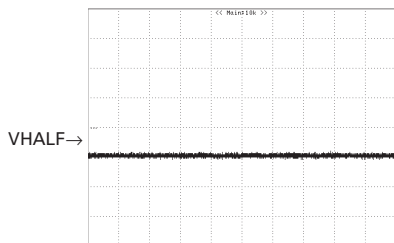
② TD 0.5V/div.500μs/div.  
Multi 32FWD



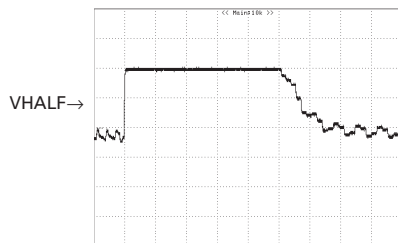
② TD 0.5V/div.500μs/div.  
Multi 32REV



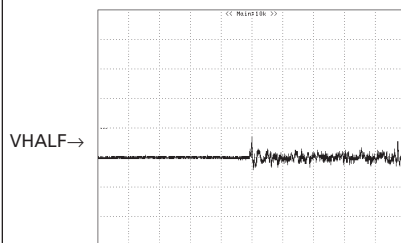
② TD 0.5V/div.20ms/div.  
Play TD



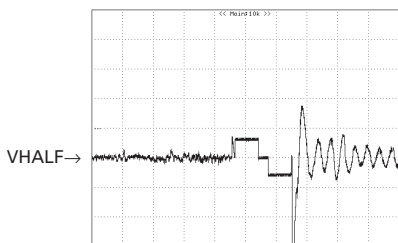
④ CRGPRV 0.5V/div. 100μs/div.  
ID search Insaide → Outside



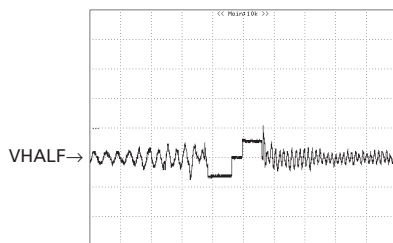
⑤ FD 0.5V/div. 1ms/div.  
Focus close



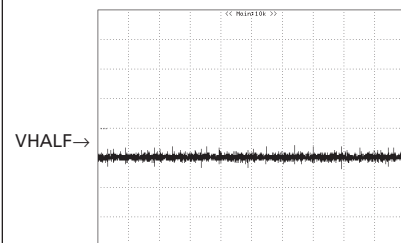
⑤ FD 0.5V/div.500μs/div.  
Focus jump L 0 → L1



⑤ FD 0.5V/div.500μs/div.  
Focus jump L1 → L 0



⑤ FD 0.5V/div.20ms/div.  
Play TD



3.11 COMPOUND UNIT(A) AND COMPOUND UNIT(B)

**D** COMPOUND UNIT(A)

A

B

C

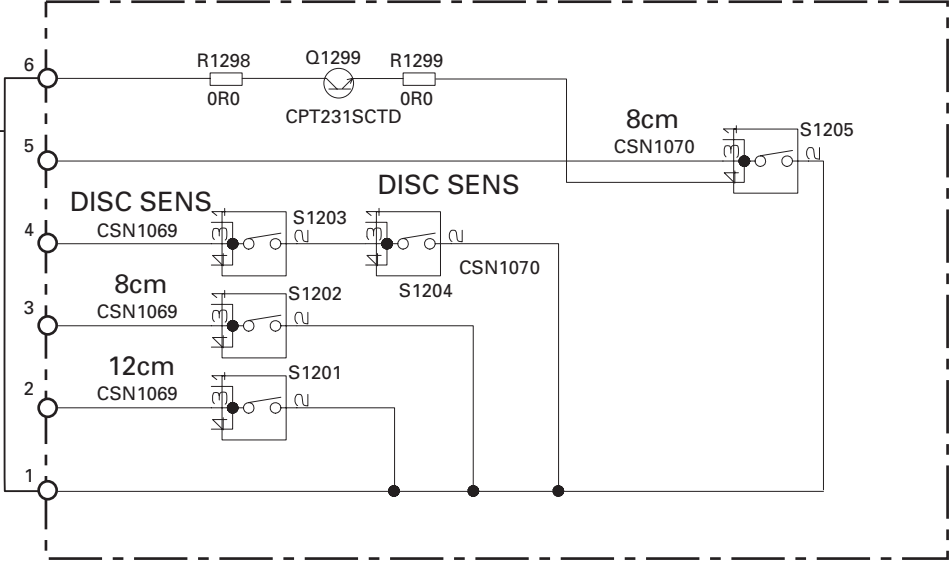
D

E

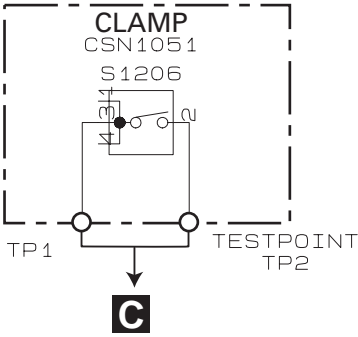
F

**C**

CN1202

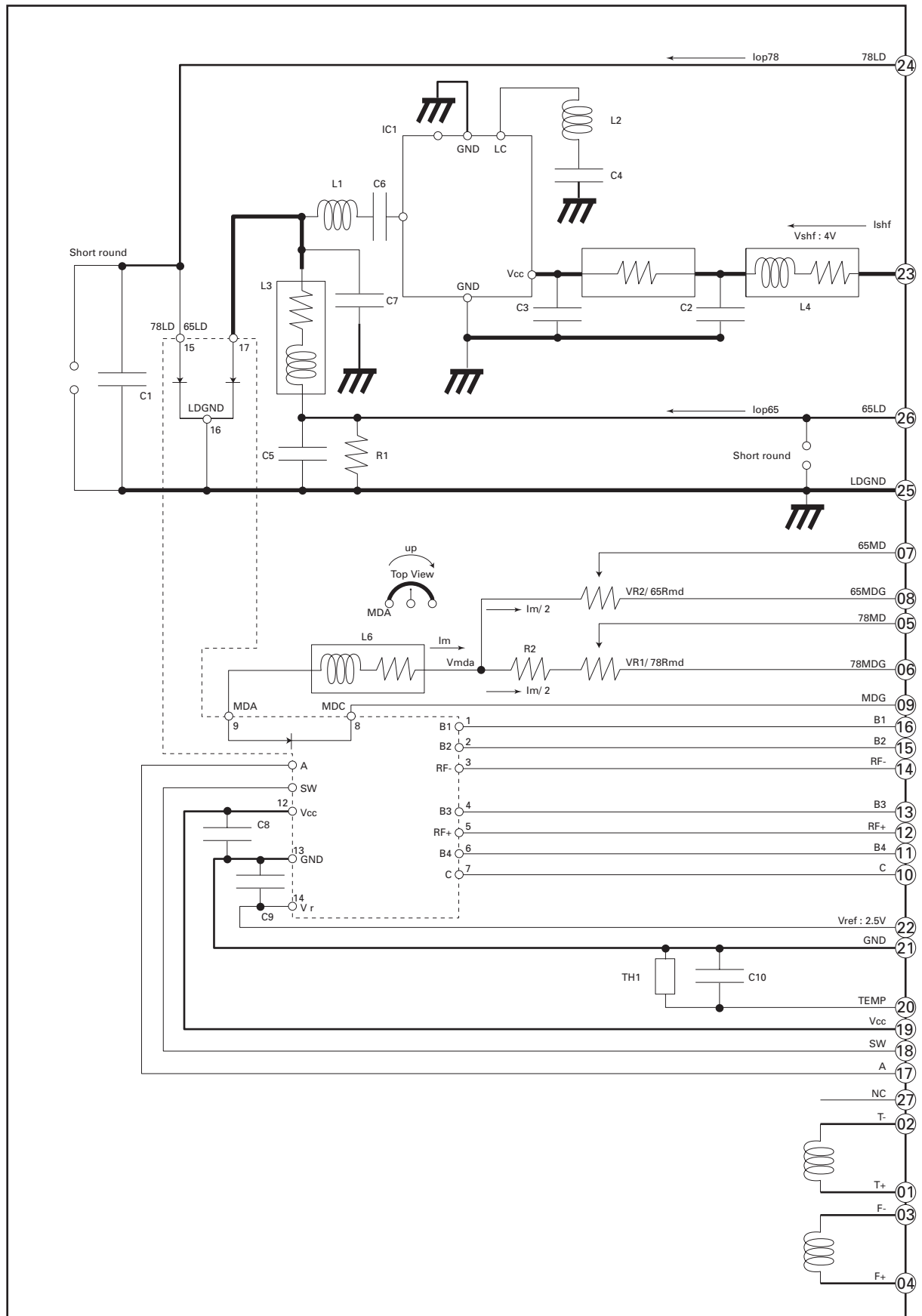


**E** COMPOUND UNIT(B)



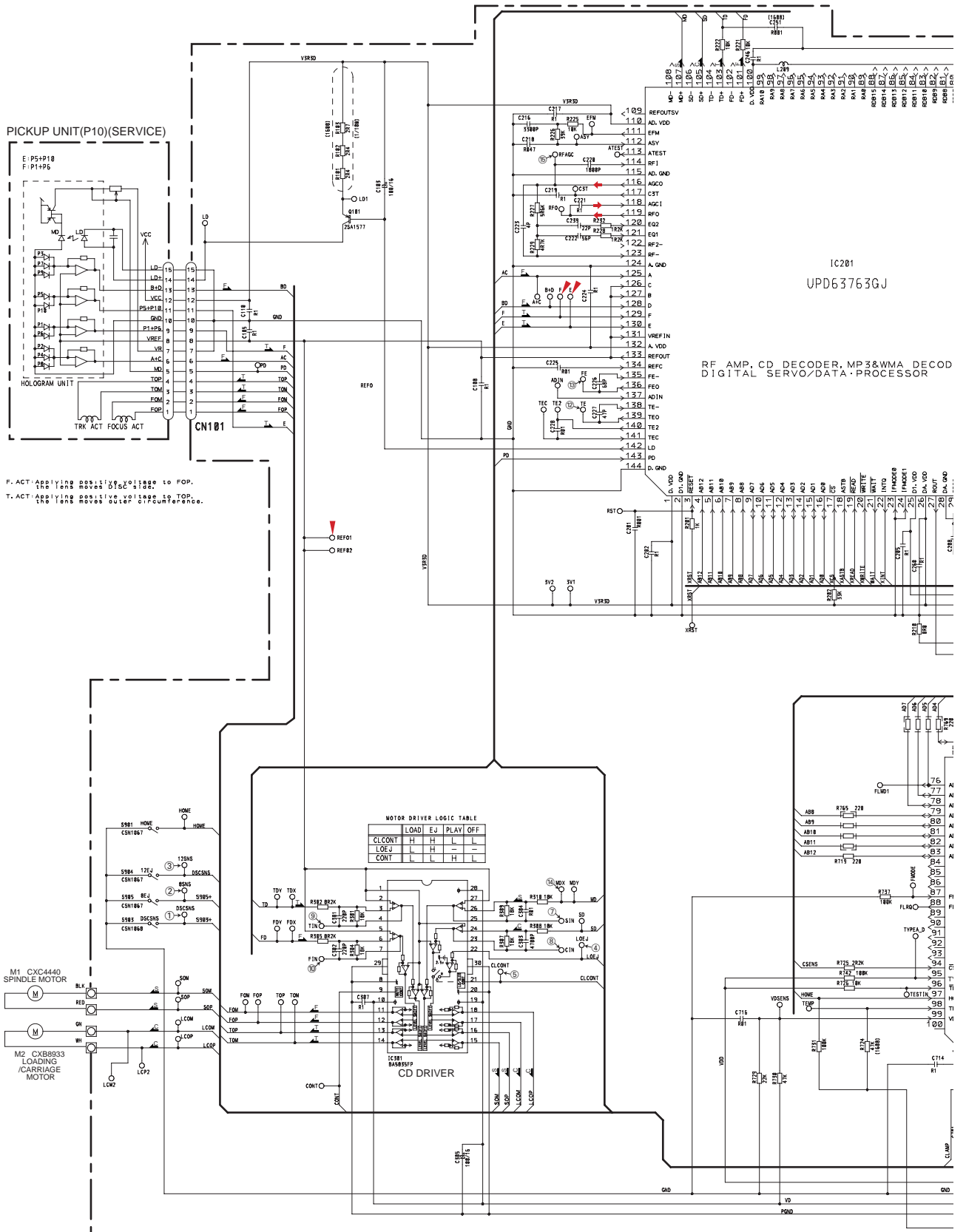
**D E**

### 3.12 PU UNIT(REFERENCE)



# 3.13 CD MECHANISM MODULE(GUIDE PAGE)

F-a





## F-b

NOTE1) GND ...CD LSI, RFAMP, CPU  
 PGND ...Actuator, Motor Driver  
 AGND ...Audio  
 These GND's are not connected to each other on PCB.  
 PGND is connected to a floating mechanism part by a screw.

- ⑧ Monitor land (ø1.2mm)  
 # Monitor land (ø0.8mm)  
 □ Land for manual soldering

## SWITCHES:

CD CORE UNIT(S10.1)  
 S901:HOME SWITCH.....ON-OFF  
 S903:DSCSNS SWITCH.....ON-OFF  
 S904:12EU SWITCH.....ON-OFF  
 S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

- SIGNAL LINE  
 F FOCUS SERVO LINE  
 T TRACKING SERVO LINE  
 C CARRIAGE SERVO LINE  
 S SPINDLE SERVO LINE

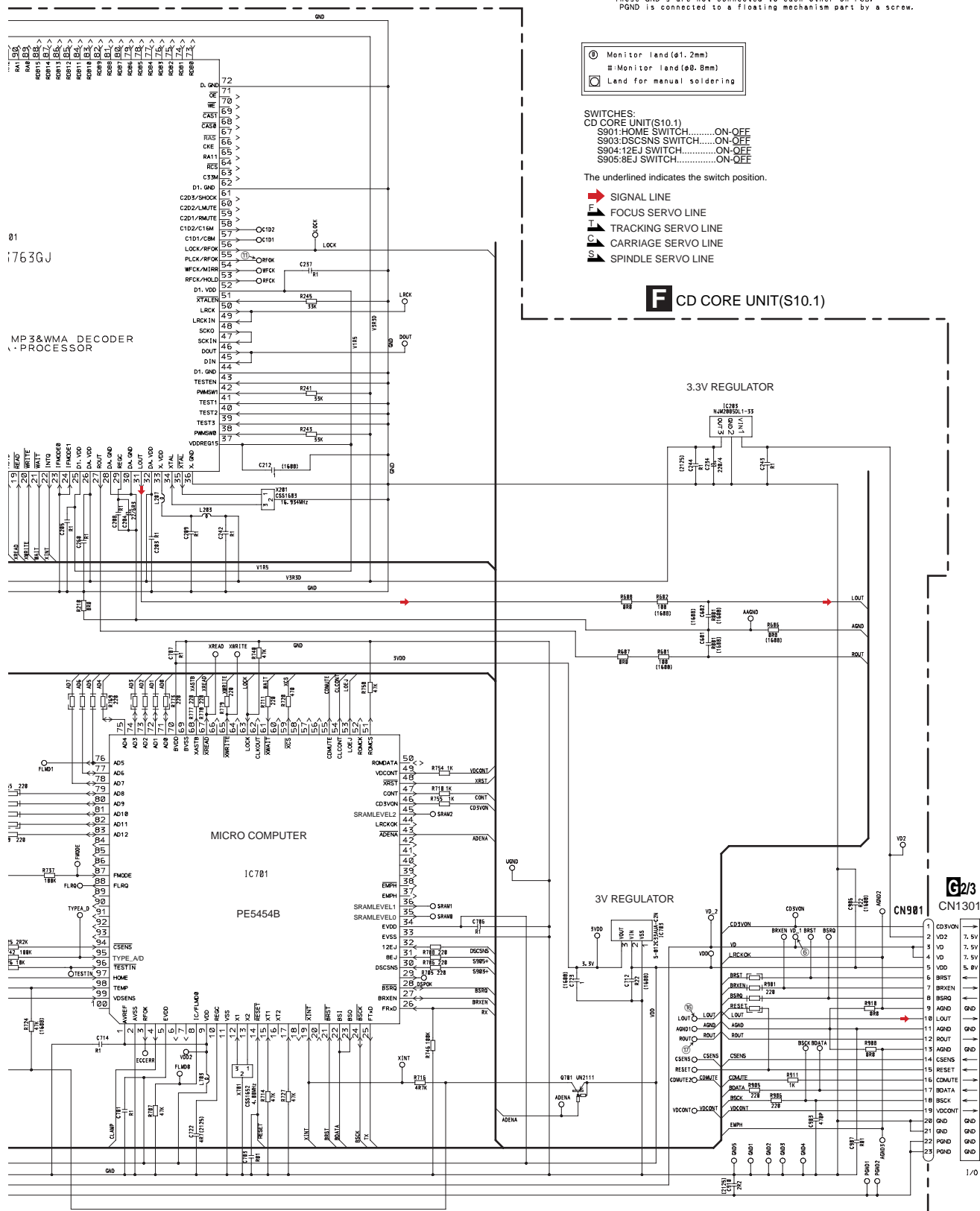
## F CD CORE UNIT(S10.1)

## 3.3V REGULATOR

## 3V REGULATOR

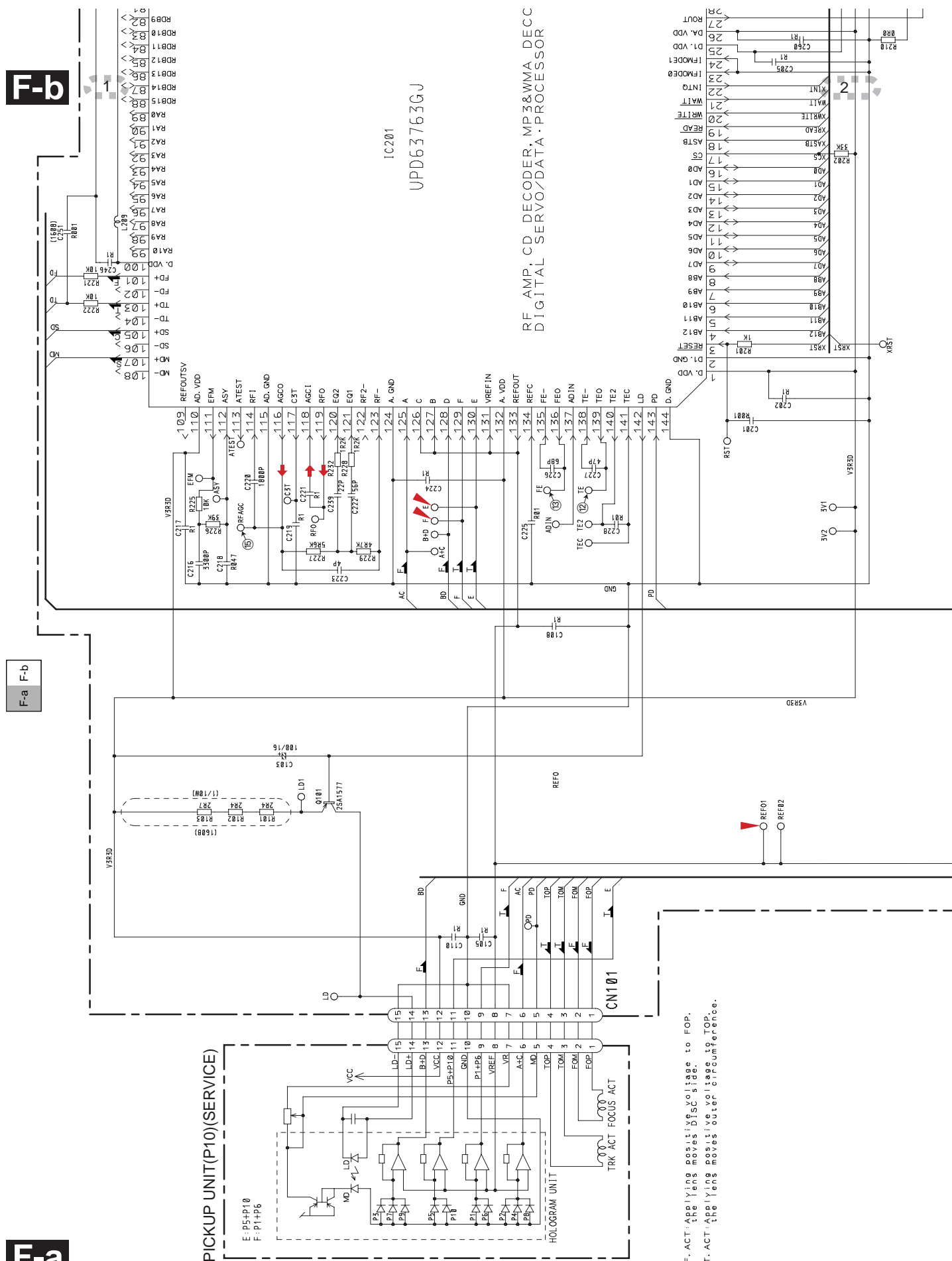
G2/3  
 CN1301

1/0

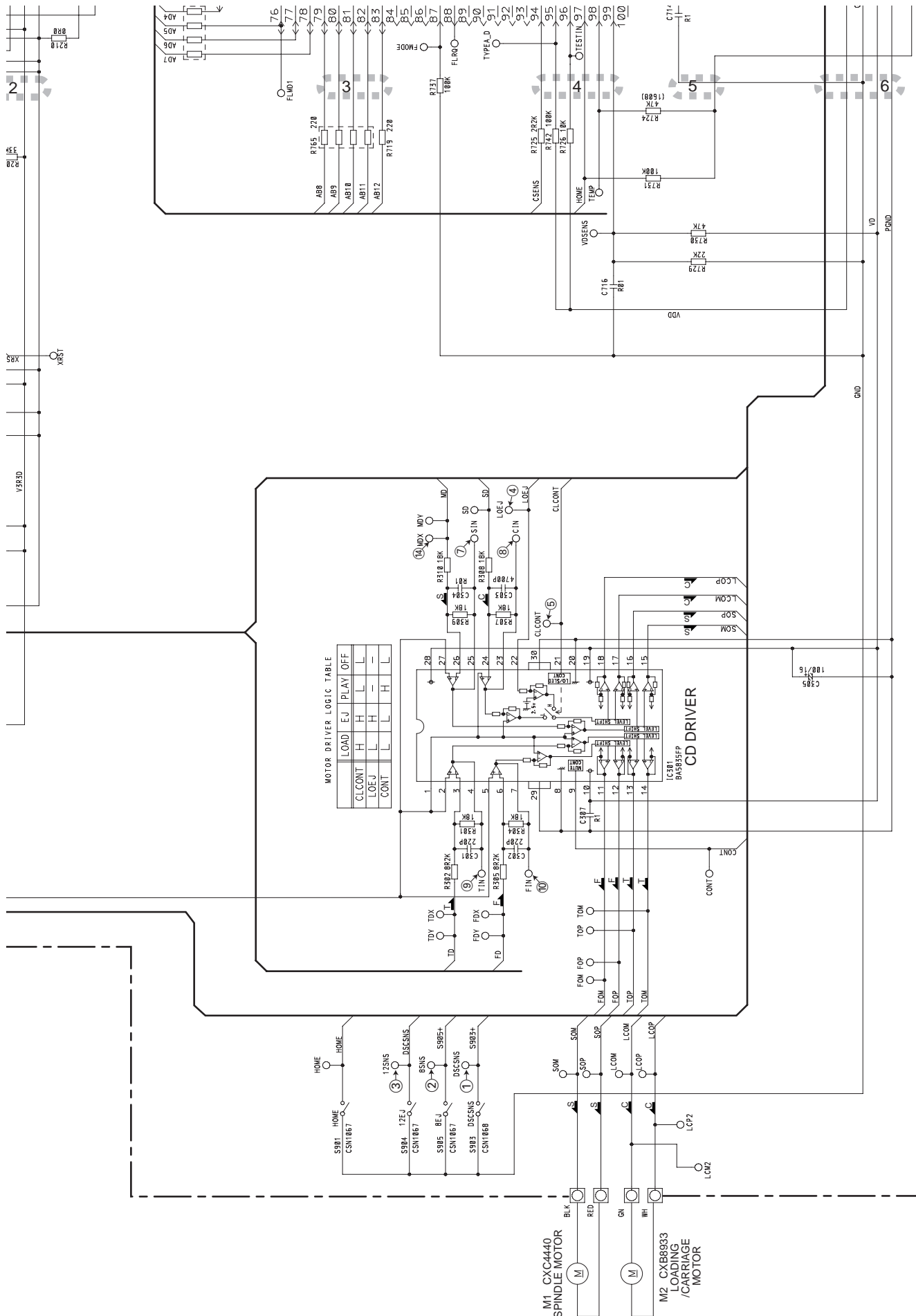


F

F-a F-b

**F-a**

F. ACT: Applying positive voltage to FOP, the lens moves DISC side.



F-b

F-a F-b

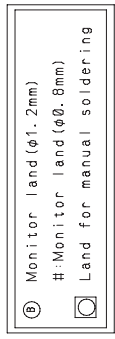
F-a

A B C D E F

A B C D E F

1 2 3 4

NOTE1) GND ...CD LSI, RFAMP, CPU  
PGND ...Actuator, Motor Driver  
AGND ...Audio  
These GND's are not connected to each other on PCB.  
PGND is connected to a floating mechanism part by a screw.



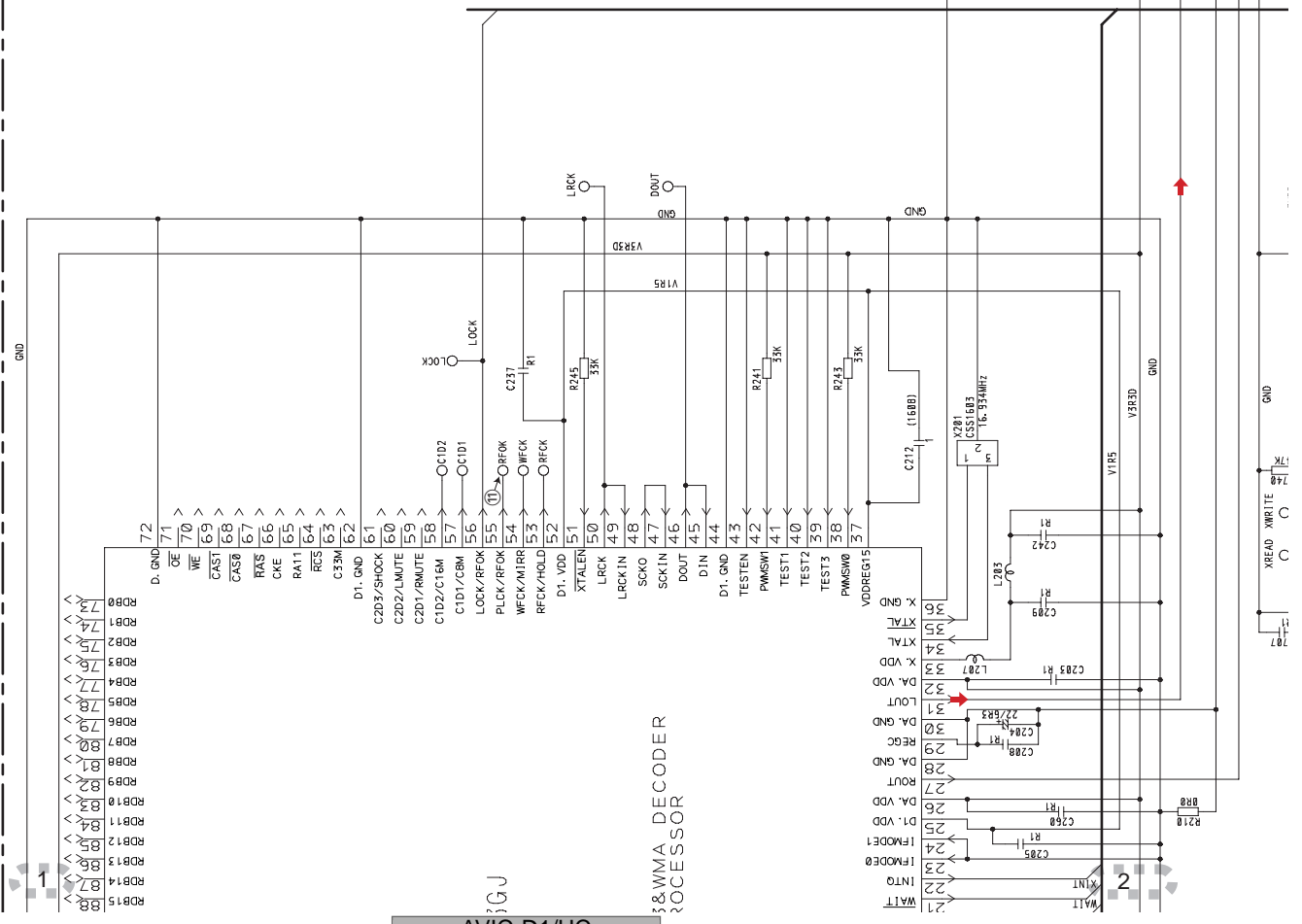
SWITCHES:  
CD CORE UNIT(S10.1)  
S901:HOME SWITCH.....ON-OFF  
S903:DSCSNS SWITCH.....ON-OFF  
S904:12EJ SWITCH.....ON-OFF  
S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

- SIGNAL LINE
- FOCUS SERVO LINE
- TRACKING SERVO LINE
- CARRIAGE SERVO LINE
- SPINDLER SERVO LINE

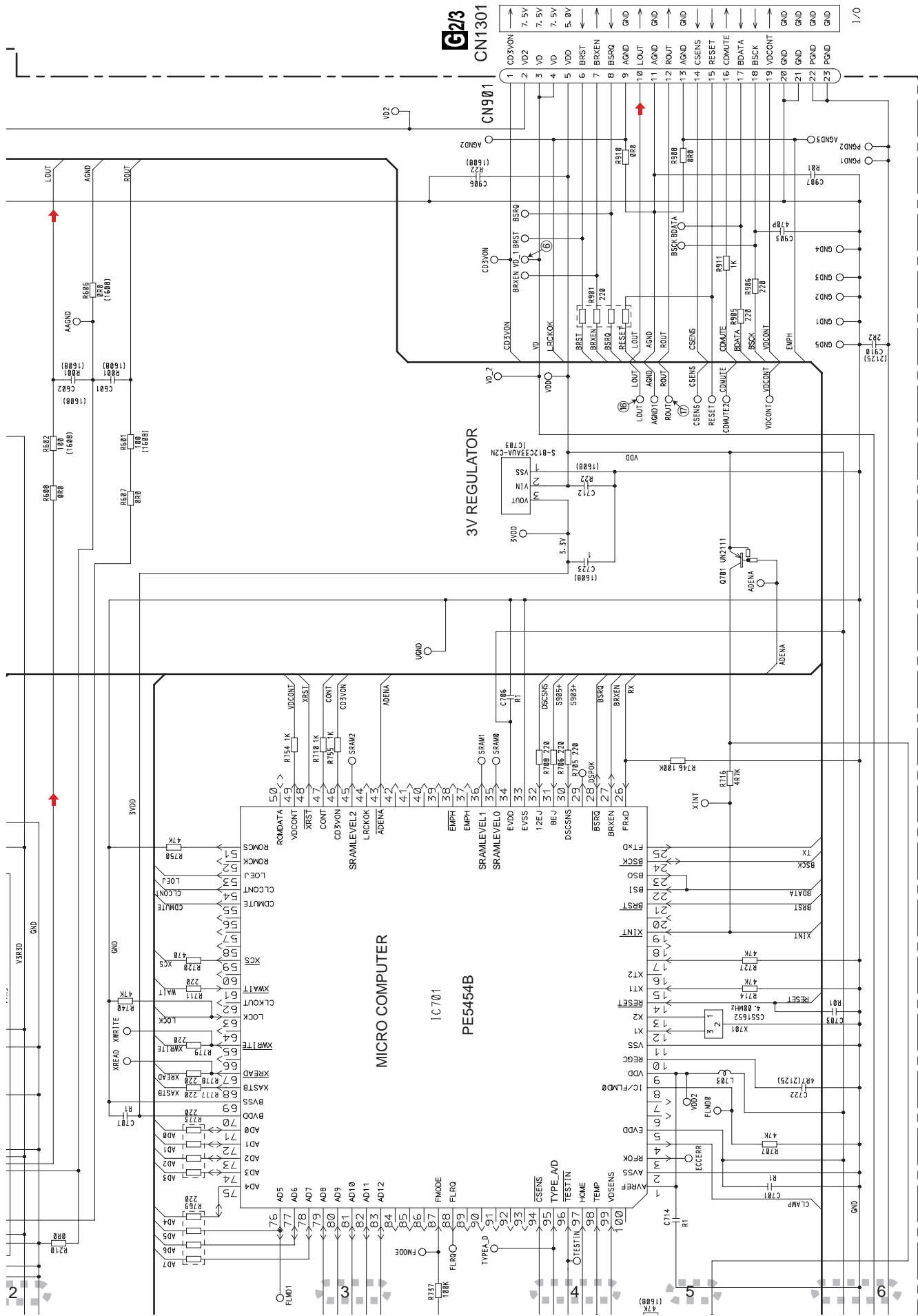
F CD CORE UNIT(S10.1)

3.3V REGULATOR



F-b

F-a F-b



F-a F-b

F-b

AVIC-D1/UC

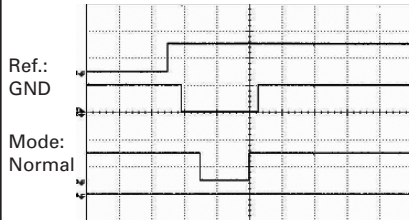
# Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.  
2. Reference voltage REFO1(1.65V)

A

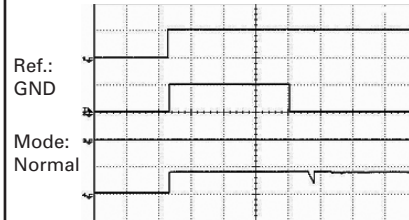
① DSCSNS 5V/div 500ms/div  
② 8SNS 5V/div  
③ 12SNS 5V/div  
④ LOEJ 5V/div

12 cm CD Loading operation



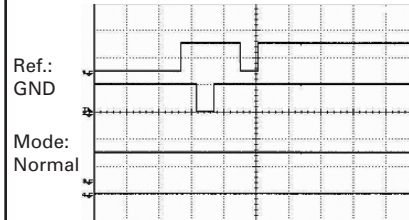
① DSCSNS 5V/div 500ms/div  
⑤ CLCONT 5V/div  
④ LOEJ 5V/div  
⑥ VD 10V/div

12 cm CD Loading operation



① DSCSNS 5V/div 500ms/div  
② 8SNS 5V/div  
③ 12SNS 5V/div  
④ LOEJ 5V/div

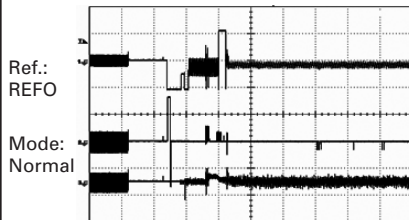
8 cm CD Loading operation



B

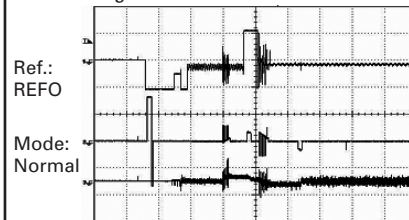
⑦ SIN 1V/div 2s/div  
⑧ CIN 500mV/div  
⑨ TIN 500mV/div

12 cm CD-DA setup operation after loading



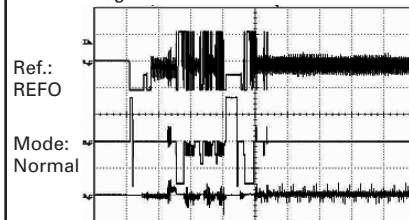
⑦ SIN 1V/div 1s/div  
⑧ CIN 500mV/div  
⑨ TIN 500mV/div

12 cm CD-ROM(1 session) setup operation after loading



⑦ SIN 1V/div 2s/div  
⑧ CIN 500mV/div  
⑨ TIN 500mV/div

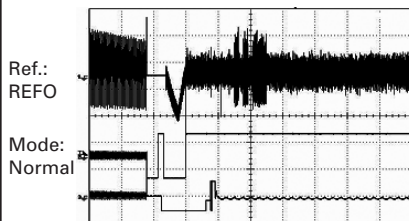
12 cm CD-ROM(3 sessions) setup operation after loading



C

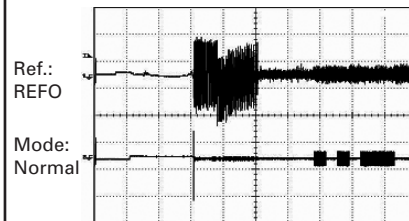
⑩ FIN 200mV/div 500ms/div  
⑪ RFOK 2V/div  
⑦ SIN 2V/div

12 cm CD-DA Source On setup operation



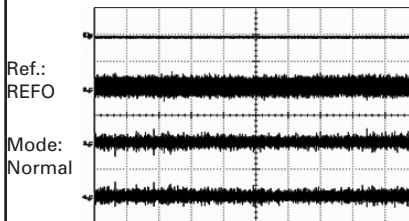
⑫ TE 500mV/div 200ms/div  
⑬ FE 500mV/div

Source On setup operation



⑬ FE 500mV/div 20ms/div  
⑩ FIN 500mV/div  
⑫ TE 500mV/div  
⑨ TIN 500mV/div

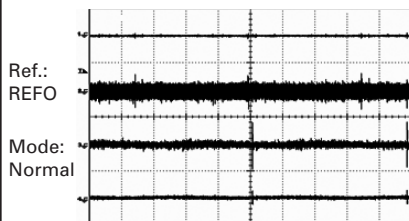
CD-DA Play operation



D

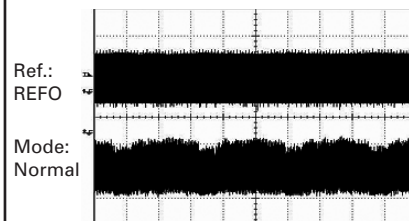
⑬ FE 500mV/div 20ms/div  
⑩ FIN 500mV/div  
⑫ TE 500mV/div  
⑨ TIN 500mV/div

CD-ROM play operation(Regular track Jump)



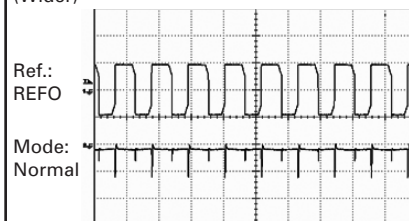
⑭ MDX 1V/div 50ms/div  
⑦ SIN 200mV/div

Spindle waveform during play operation



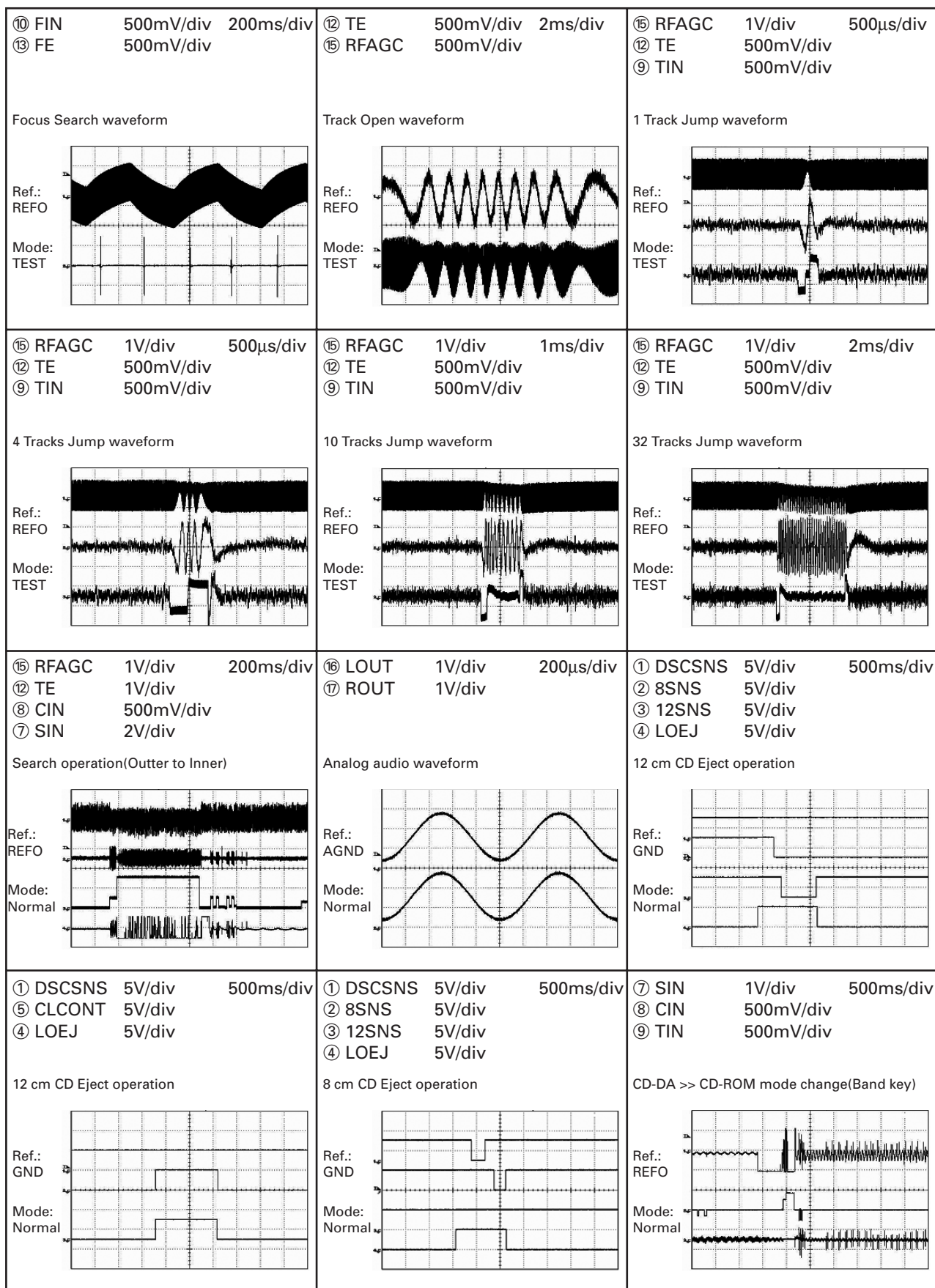
⑭ MDX 2V/div 5μs/div  
⑦ SIN 1V/div

Spindle waveform during play operation (Wider)



E

F

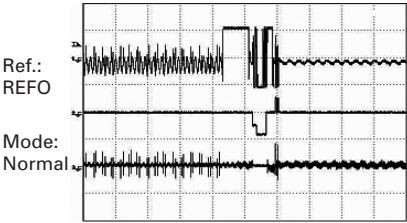




A

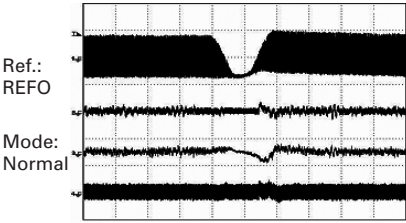
⑦ SIN 1V/div 500ms/div  
⑧ CIN 500mV/div  
⑨ TIN 500mV/div

CD-ROM >> CD-DA mode change(Band key)



⑮ RFAGC 1V/div 500μs/div  
⑨ TIN 1V/div  
⑫ TE 1V/div  
⑩ FIN 1V/div

Black dot(800μm) during play



B

C

D

E

F



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A

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B

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C

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D

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E

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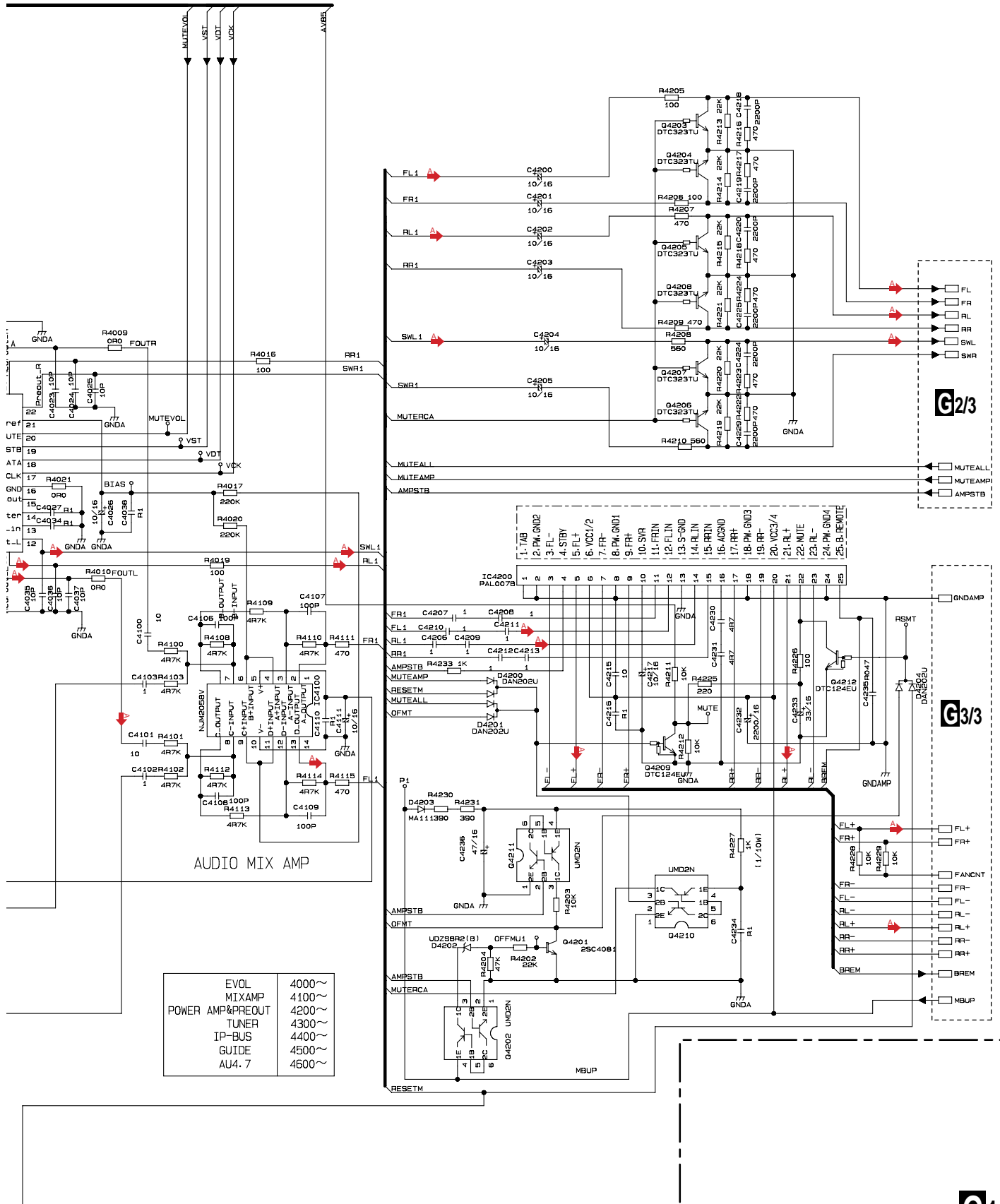
■

△



A AUDIO SIGNAL

# G1/3 SYSTEM UNIT (AUDIO)



△

C

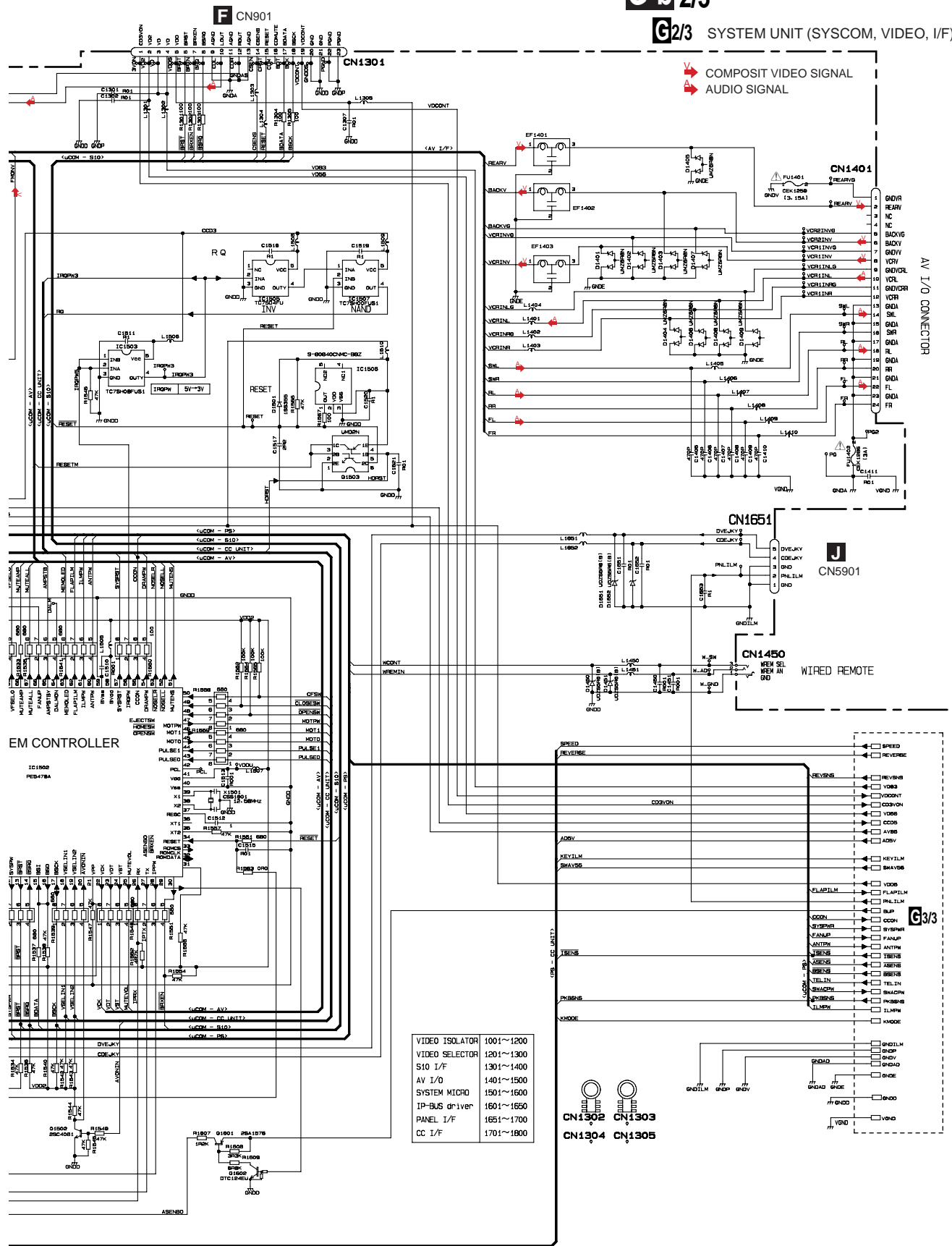


# E

F

G-b 2/3

G2/3 SYSTEM UNIT (SYSCOM, VIDEO, I/F)



G2/3





COMPOSITE VIDEO SIGNAL  
AUDIO SIGNAL

AV I/O CONNECTOR

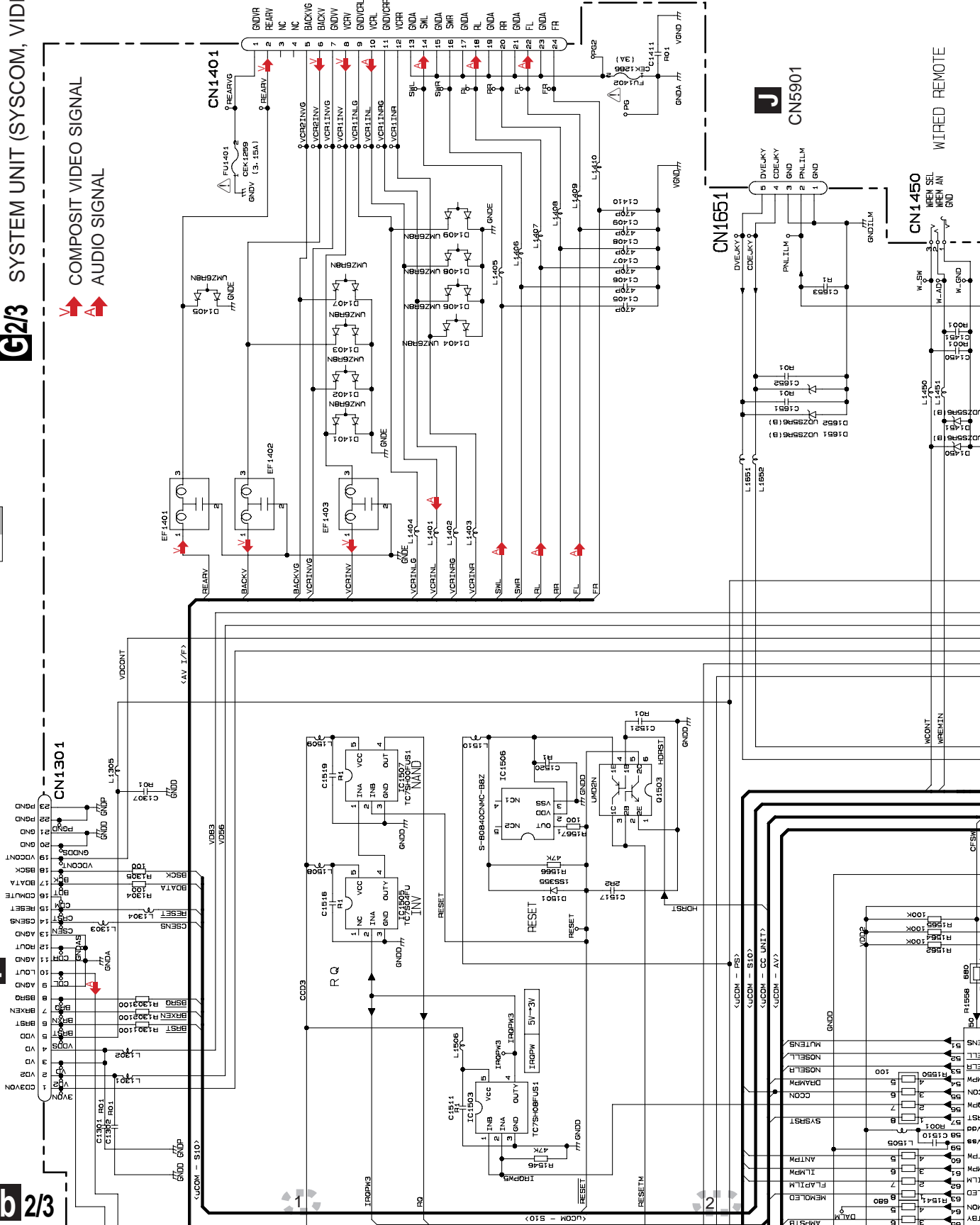
AVIC-D1/UC

J CN5901

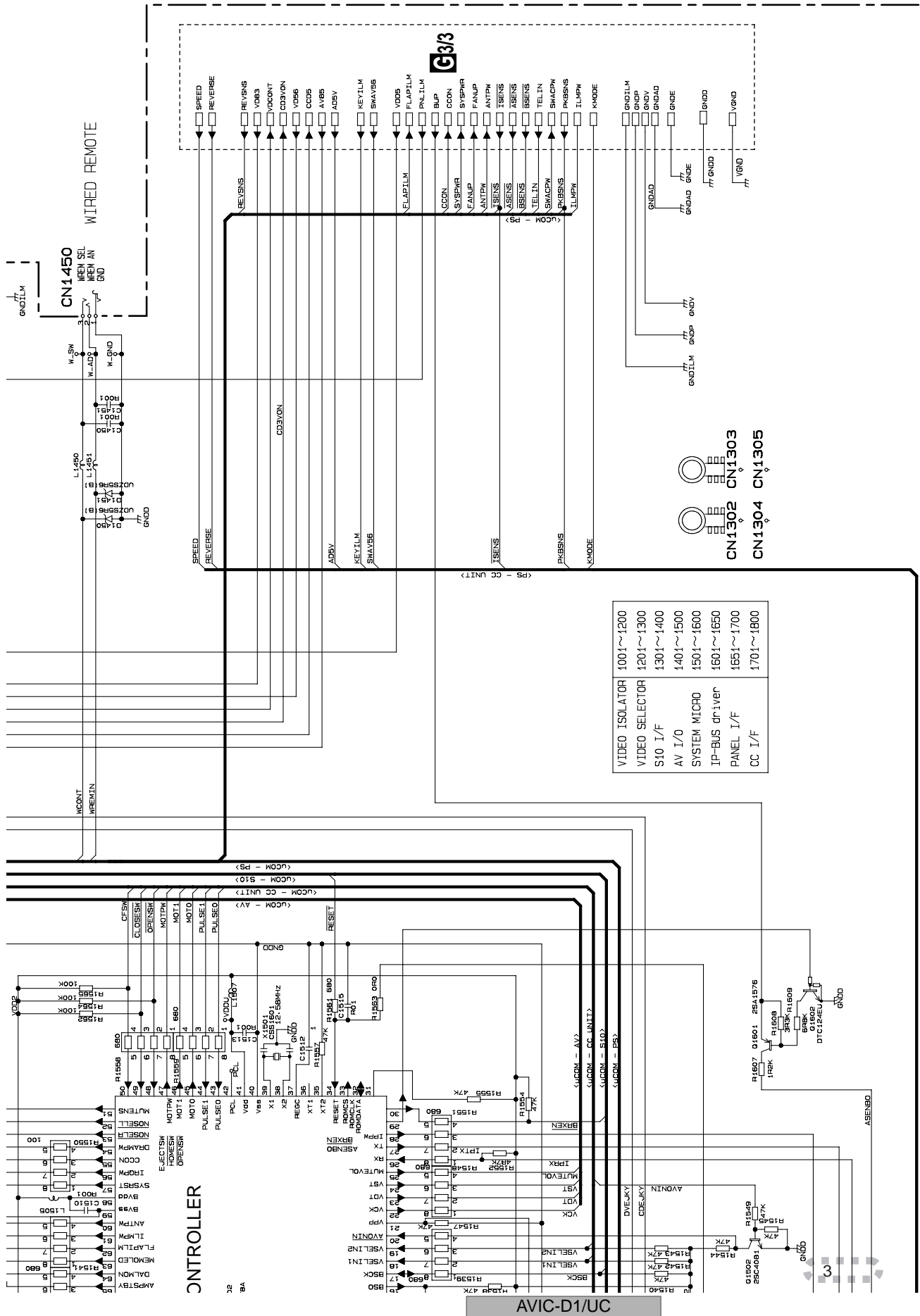
WIRED REMOTE

CN1450

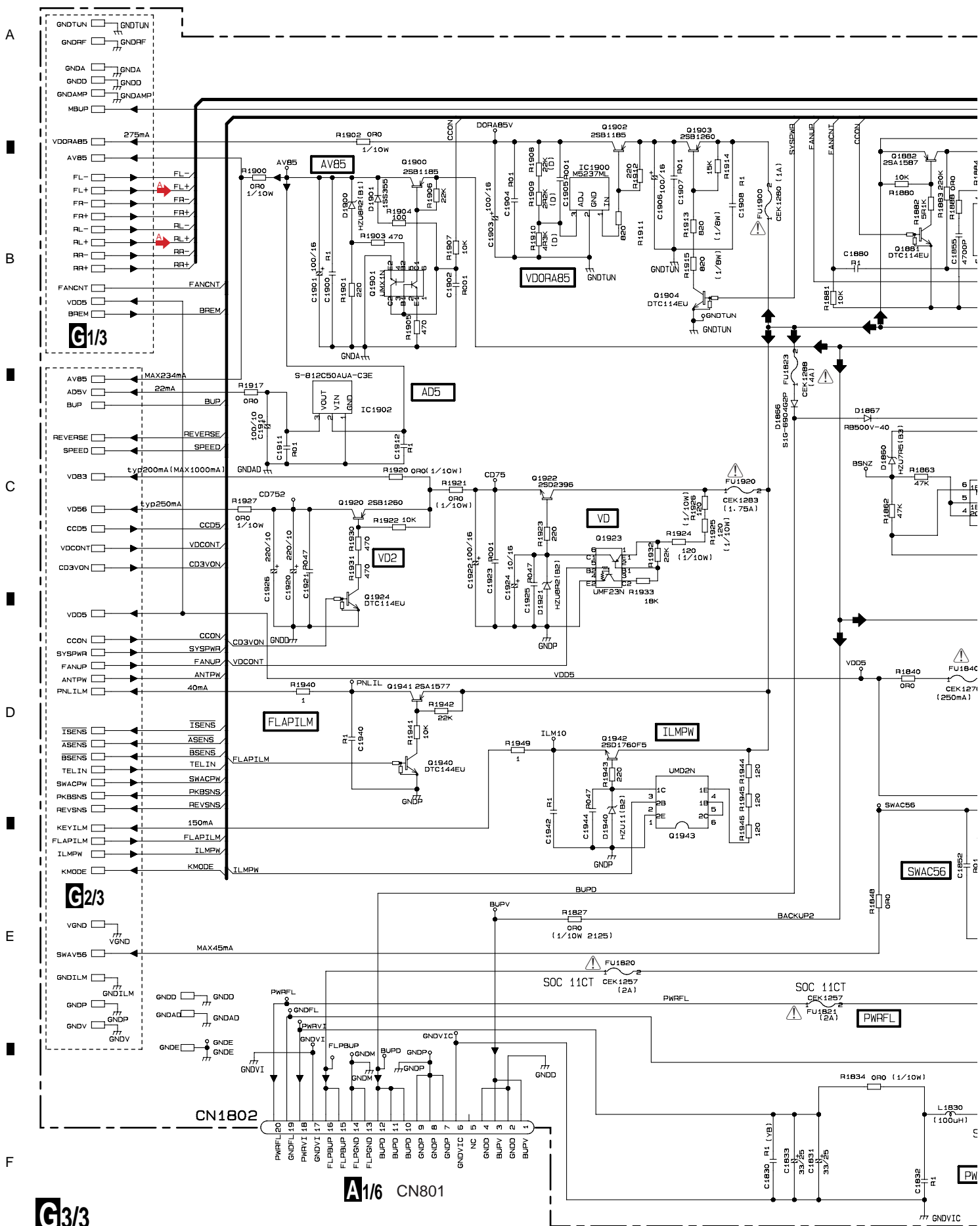
CN1651







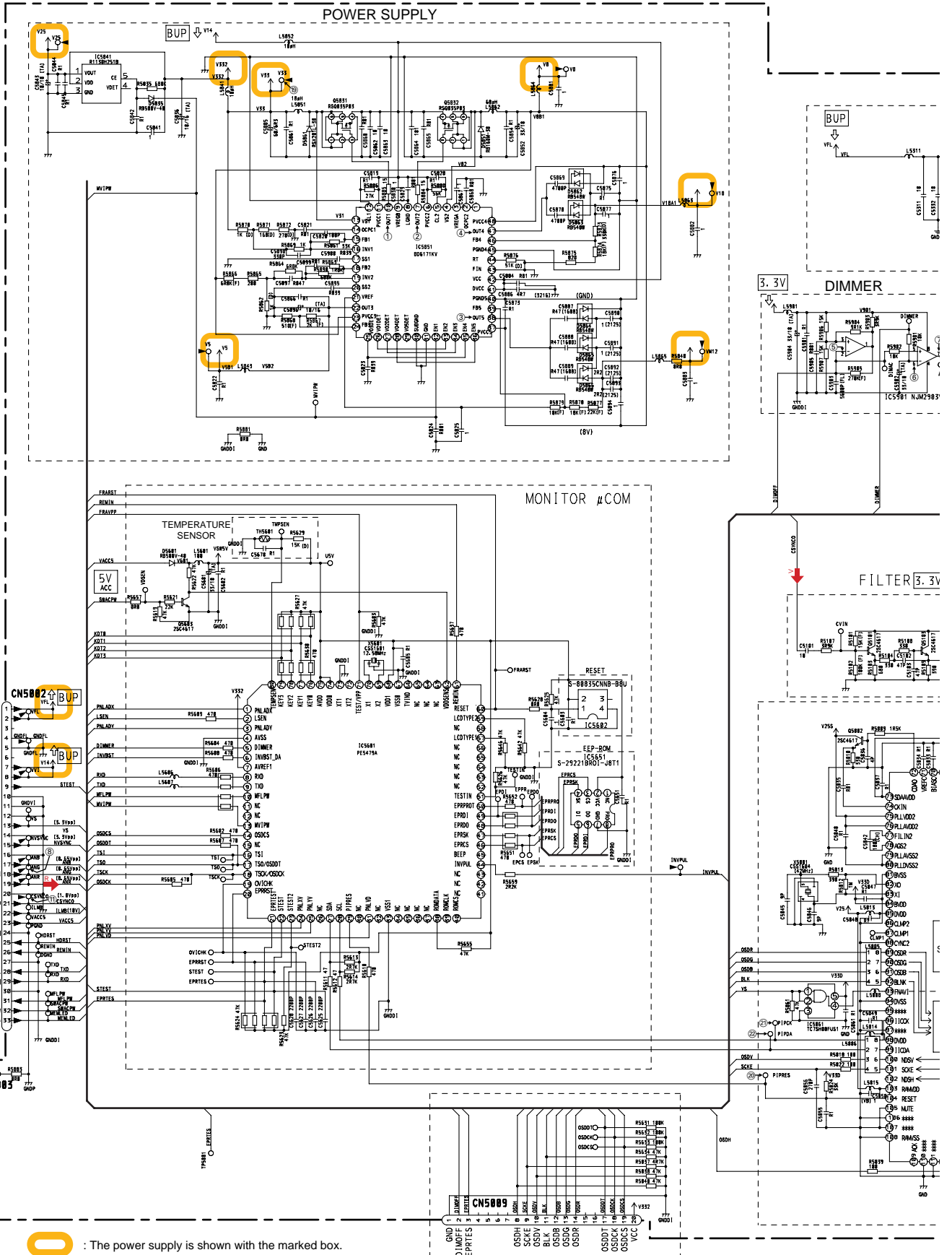
# 3.16 SYSTEM UNIT (P/S)





### 3.17 MONITOR PCB (GUIDE PAGE)

H-a



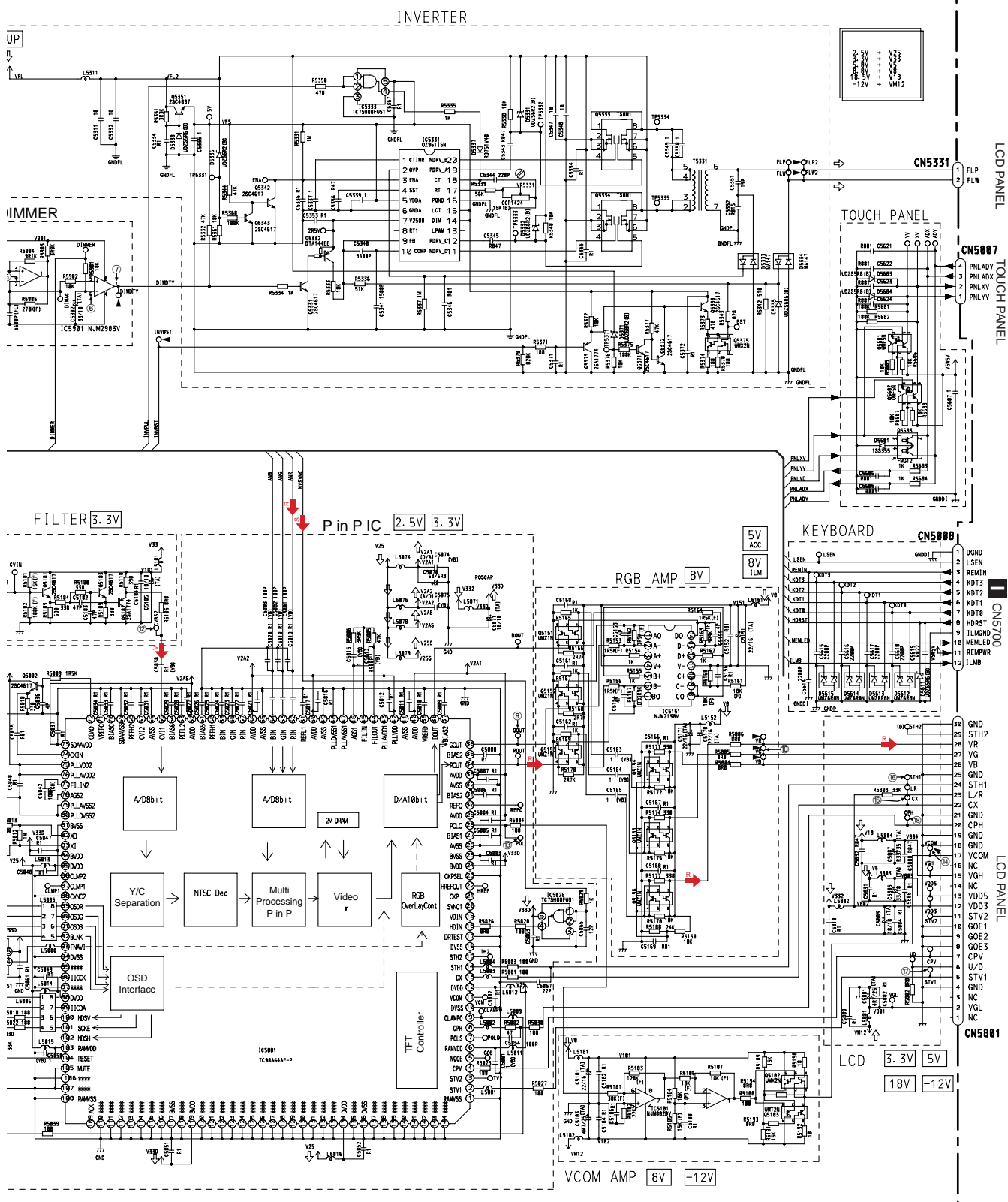
○ : The power supply is shown with the marked box.

Monitor Adjustment PCB (GGF1416)

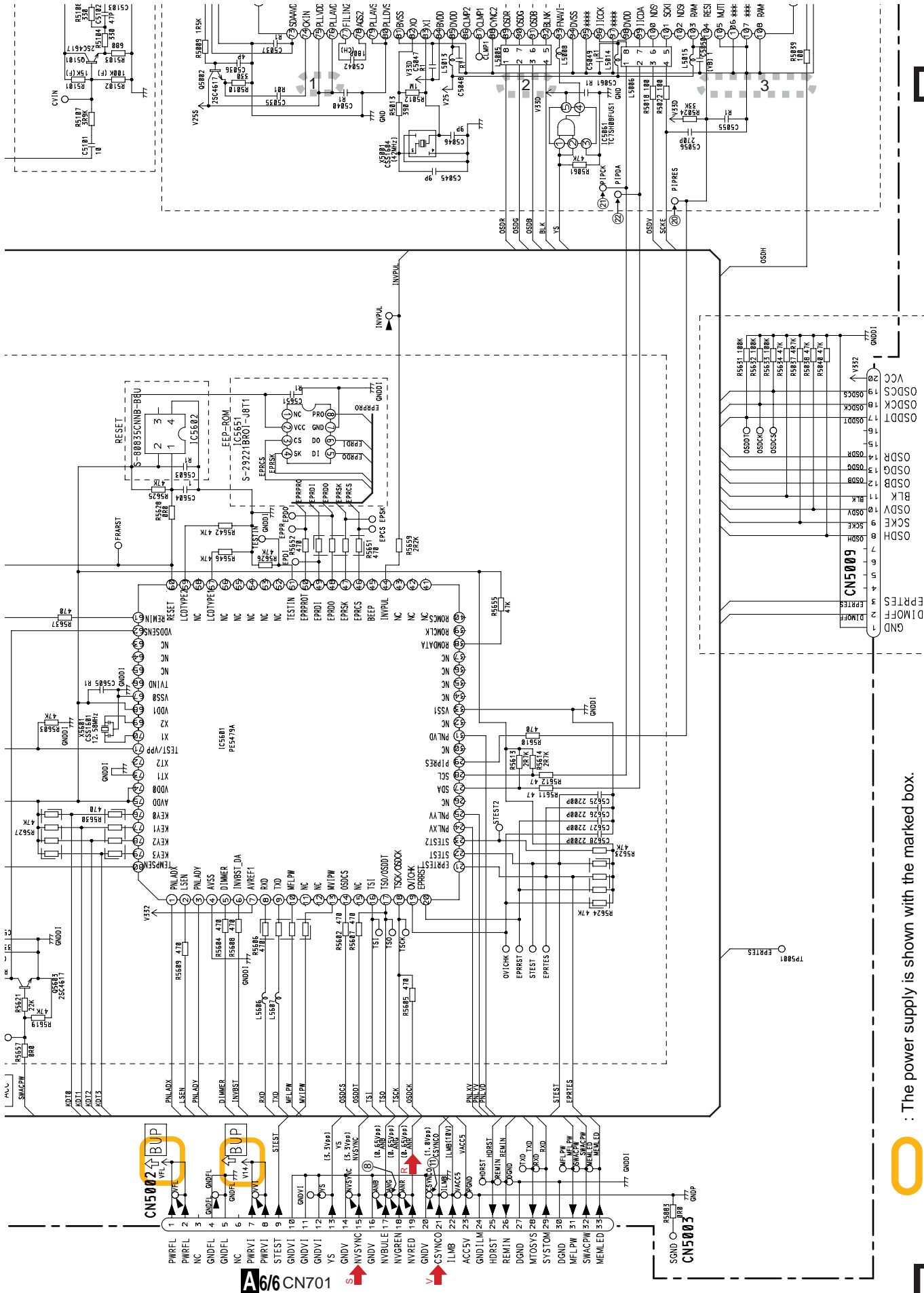
H-b

MONI. PANEL UNIT  
Consists of  
MONITOR PCB  
KEYBOARD PCB  
PANEL PCB

H MONITOR PCB



**H-a**



The power supply is shown with the marked box.



H-a

H-b

F

E

D

H-a H-b

C

B

A



A

B

C

D

E

F

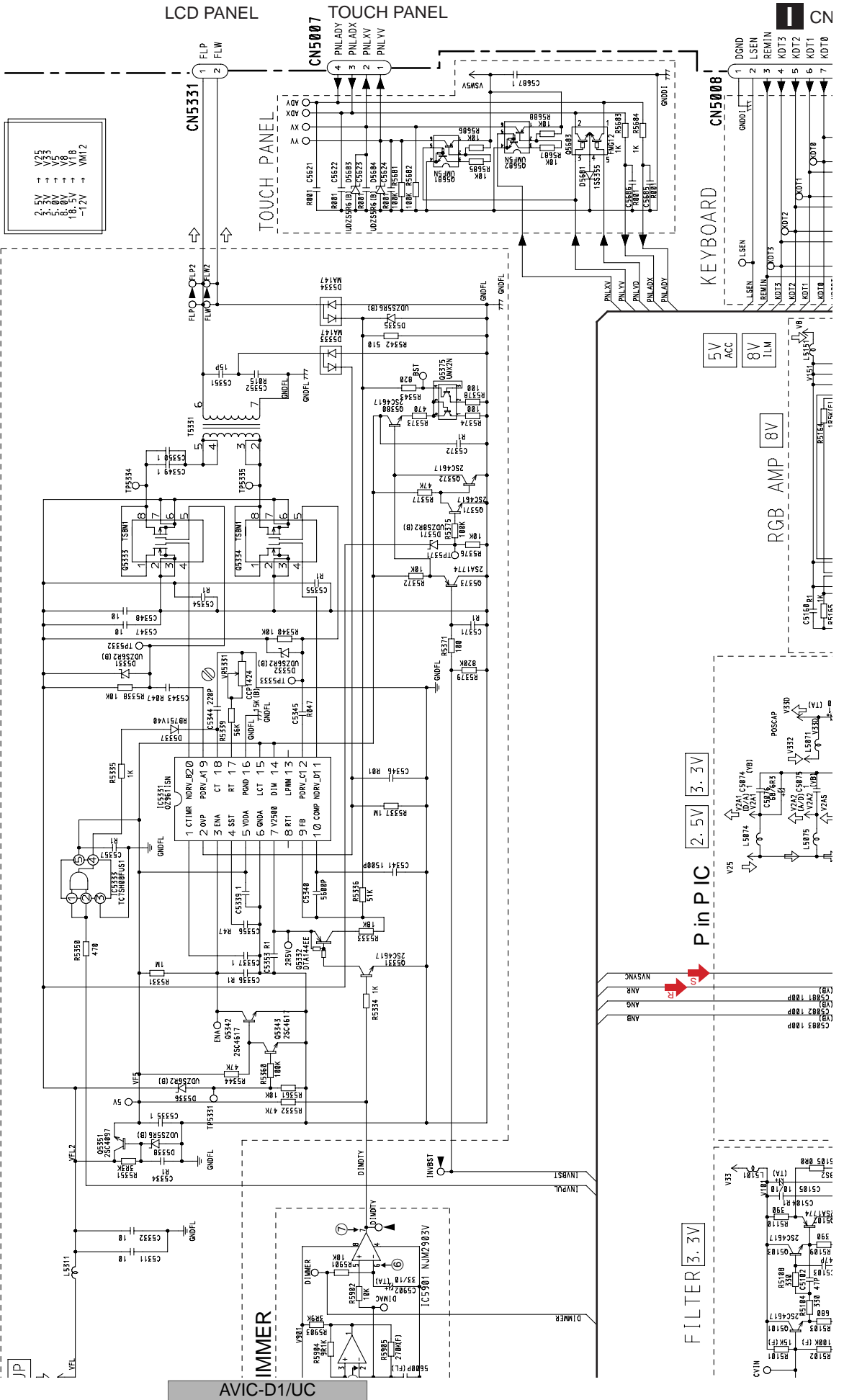
H-b

H-a H-b

MONI. PANEL UNIT  
Consists of  
MONITOR PCB  
KEYBOARD PCB  
PANEL PCB

H MONITOR PCB

INVERTER



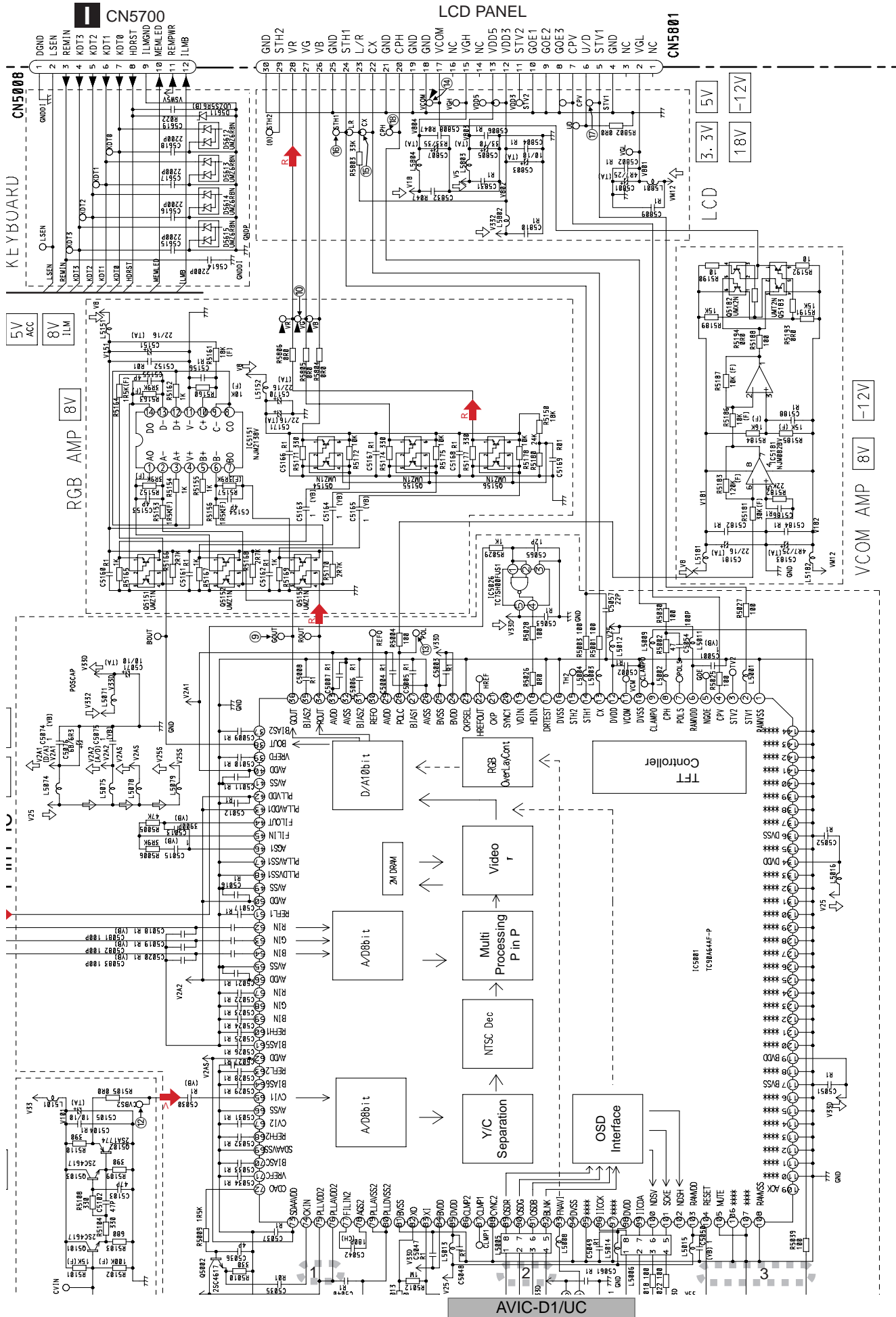
LCD PANEL

TOUCH PANEL

CN

AVIC-D1/UC





RGB Signal  
Sync Signal  
Composite Video Signal

H-a H-b

H-b

A  
B  
C  
D  
E  
F

5 6 7 8

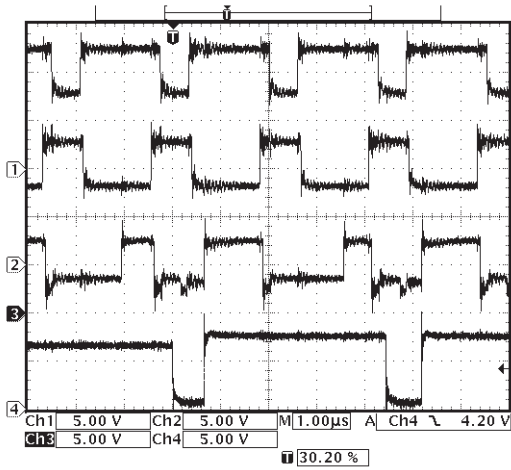
5 6 7 8

# Waveforms

The encircled number denote measuring pointes in the circuit diagram.

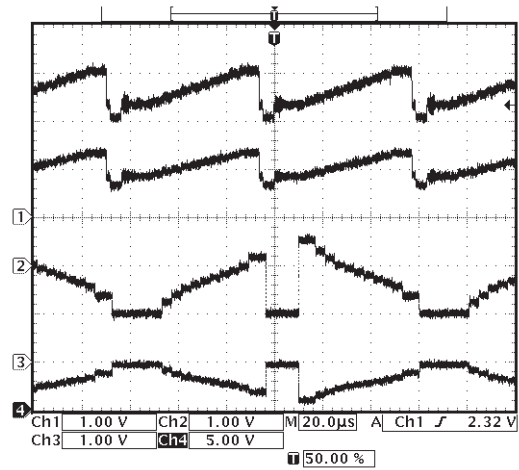
A

- ① CH1 : IC5851 Pin 10      ③ CH3 : IC5851 Pin 38  
② CH2 : IC5851 Pin 7      ④ CH4 : IC5851 Pin 47



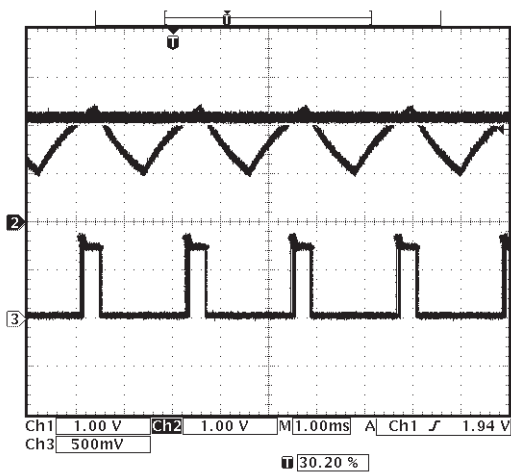
B

- ⑪ CH1 : CSYNC0      ⑨ CH3 : GOUT  
⑫ CH2 : CVBS2      ⑩ CH4 : VG



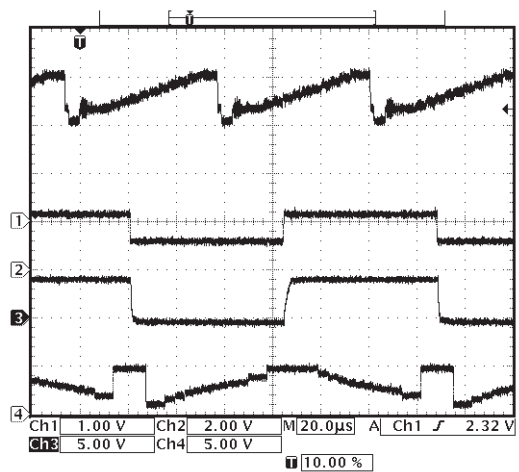
C

- ⑤ CH1 : IC5901 Pin 2      ⑦ CH3 : IC5901 Pin 7  
⑥ CH2 : IC5901 Pin 6



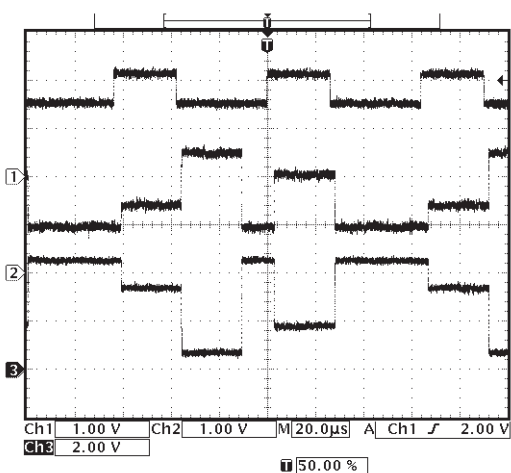
D

- ⑪ CH1 : CSYNC0      ⑭ CH3 : VCOM  
⑬ CH2 : POL      ⑩ CH4 : VG



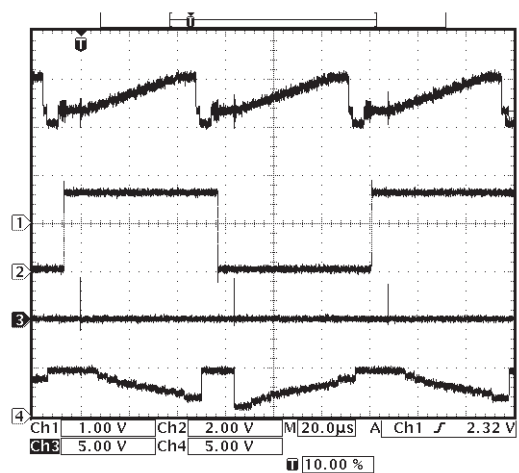
E

- ⑧ CH1 : ANG      ⑩ CH3 : VG  
⑨ CH2 : GOUT



F

- ⑪ CH1 : CSYNC0      ⑯ CH3 : STH1  
⑮ CH2 : CX      ⑩ CH4 : VG

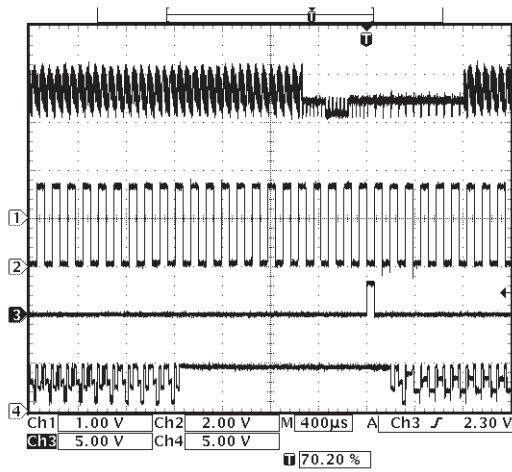


⑪ CH1 : CSYNC0

⑰ CH3 : STV1

⑮ CH2 : CX

⑩ CH4 : VG

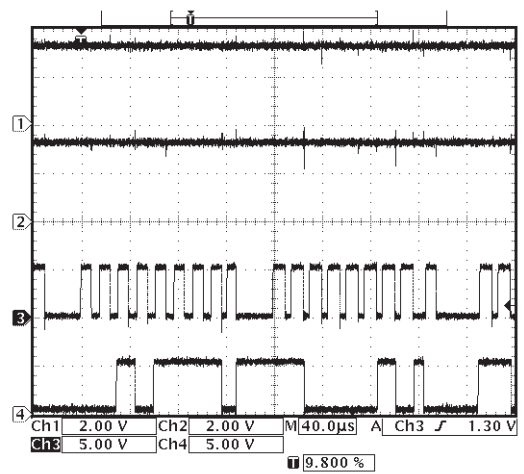


⑲ CH1 : V33

⑳ CH3 : PIPCK

⑳ CH2 : PIPRES

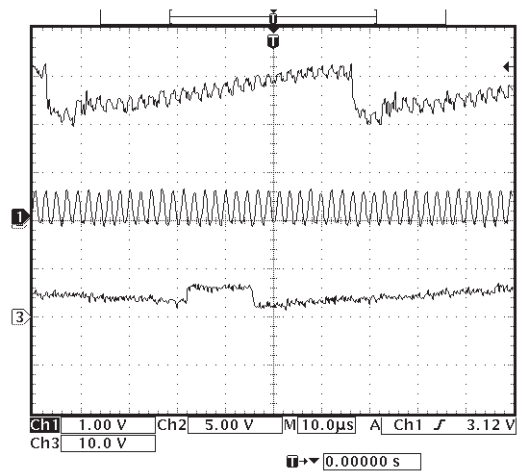
㉑ CH4 : PIPDA



⑪ CH1 : CSYNC0

⑩ CH3 : VG

⑮ CH2 : CPH

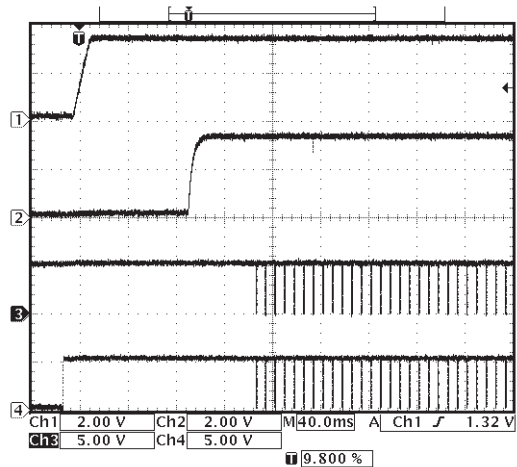


⑲ CH1 : V33

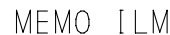
㉑ CH3 : PIPCK

⑳ CH2 : PIPRES

㉒ CH4 : PIPDA







1 2 3 4

# 3.19 PANEL PCB

A

B

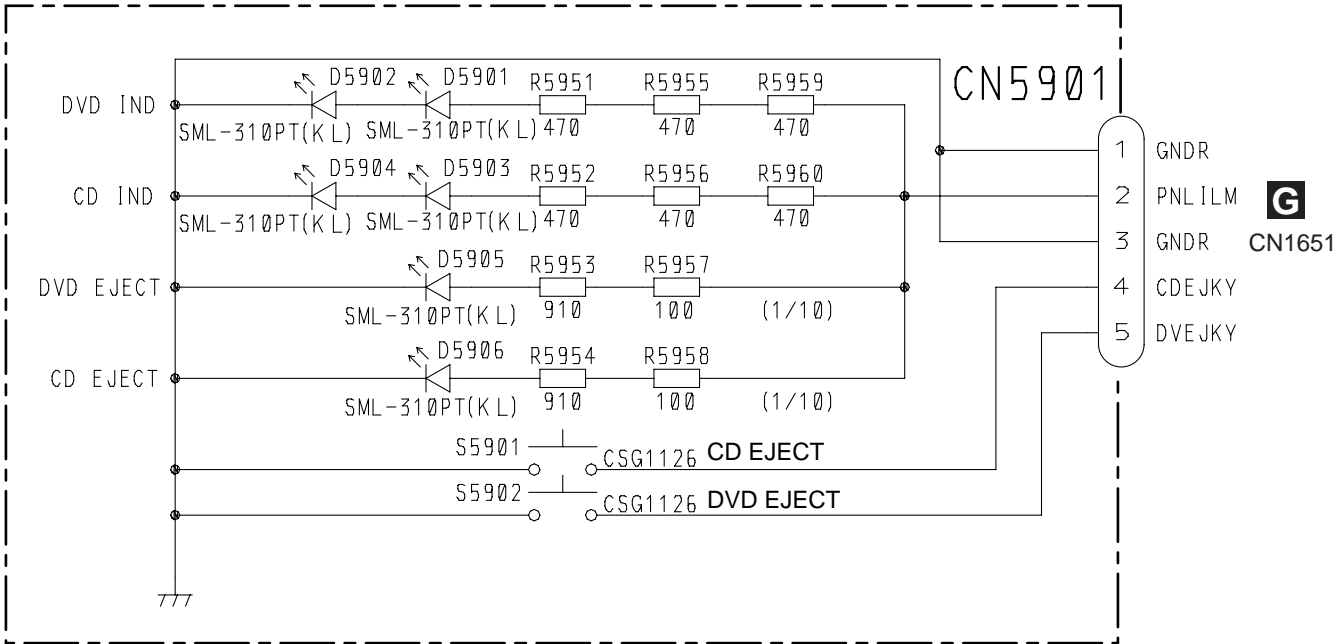
C

D

E

F

**J** PANEL PCB



**MONI\_PANEL UNIT**  
Consists of  
MONITOR PCB  
KEYBOARD PCB  
PANEL PCB

**J**

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A

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B

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C

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D

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E

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F

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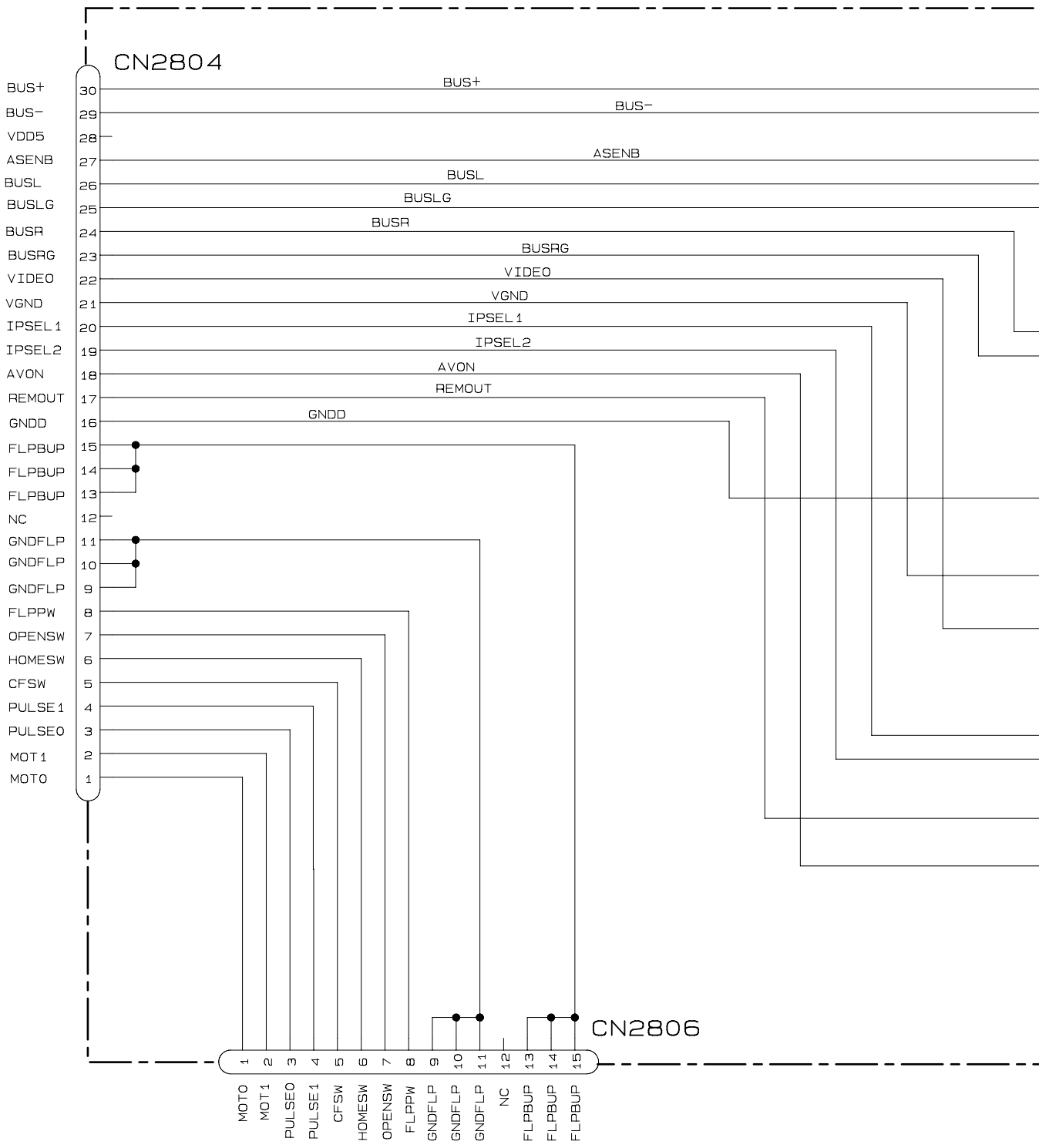
■

8

■

AVIC-D1/UC

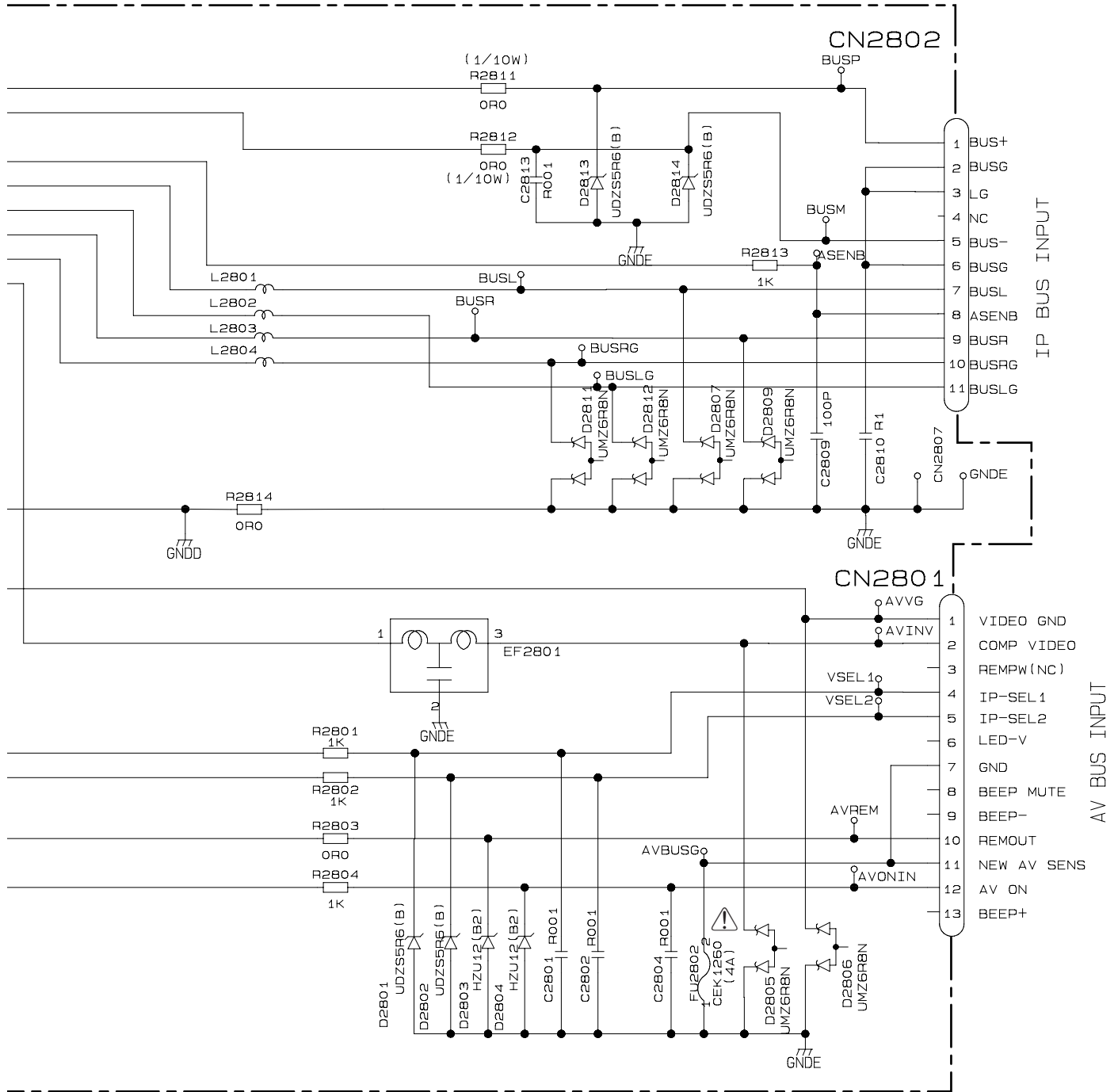
3.20 CONNECTOR UNIT



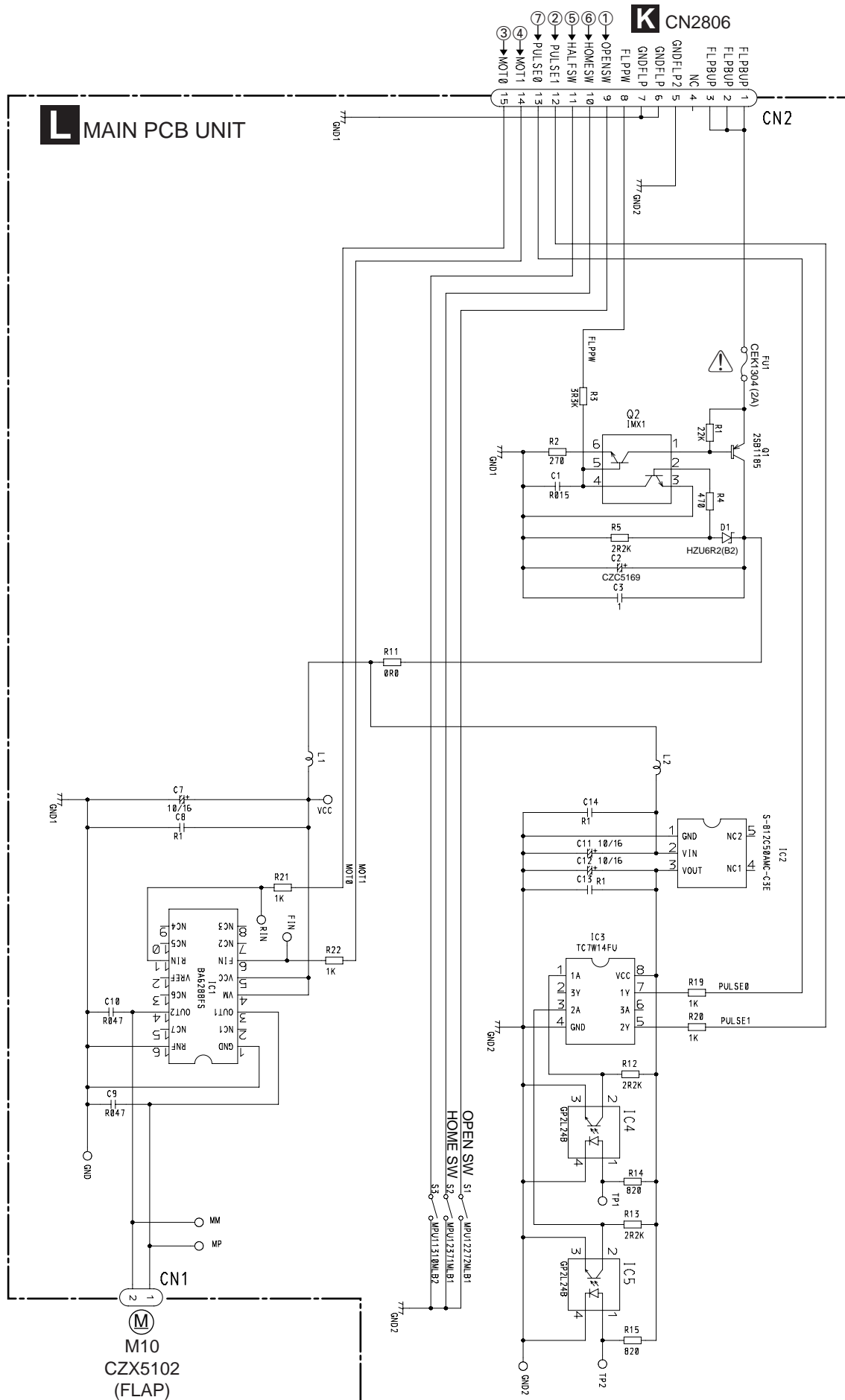
L CN2



# CONNECTOR UNIT



## 3.21 MAIN PCB UNIT



## ● Waveforms

The encircled number denote measuring points in the circuit diagram.

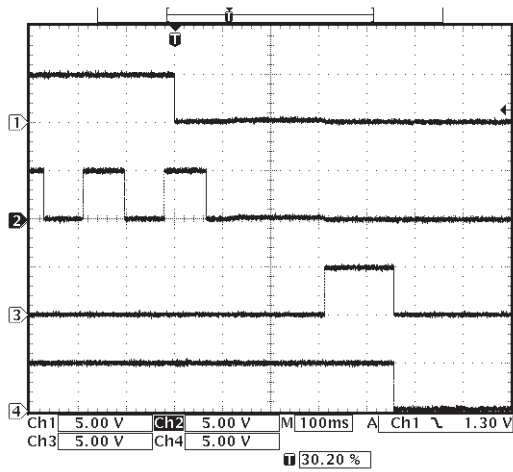
### • FULL OPEN

① CH1 : OPENSF

③ CH3 : MOT0

② CH2 : PULSE1

④ CH4 : MOT1



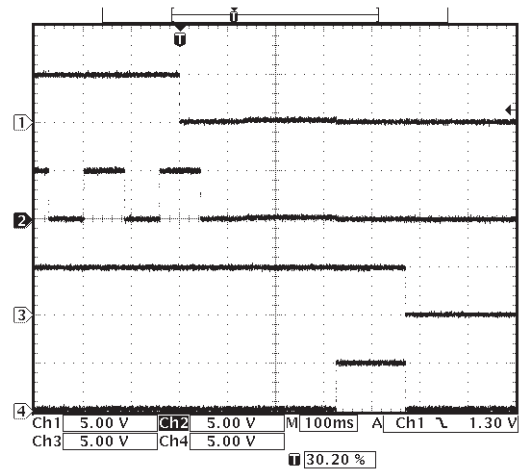
### • CLOSE

⑥ CH1 : HOMESF

③ CH3 : MOT0

② CH2 : PULSE1

④ CH4 : MOT1



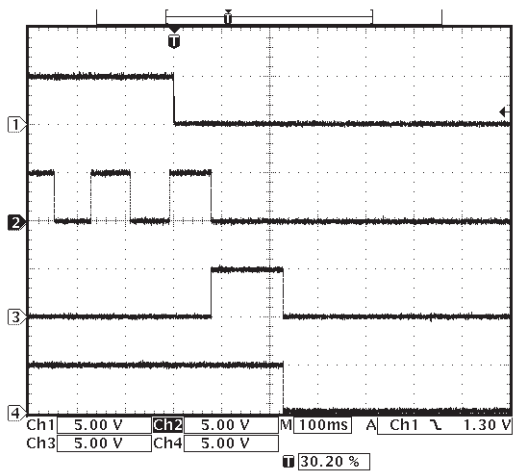
### • HALF OPEN

⑤ CH1 : HALFSP

③ CH3 : MOT0

② CH2 : PULSE1

④ CH4 : MOT1



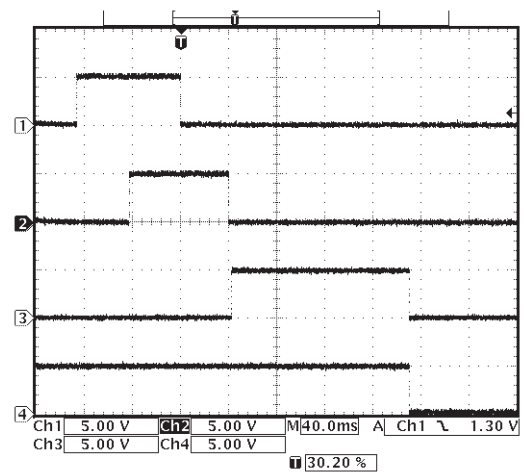
### • ANGLE

⑦ CH1 : PULSE0

③ CH3 : MOT0

② CH2 : PULSE1

④ CH4 : MOT1



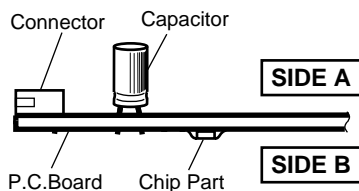
# 4. PCB CONNECTION DIAGRAM

## 4.1 CC UNIT

### NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.  
For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams



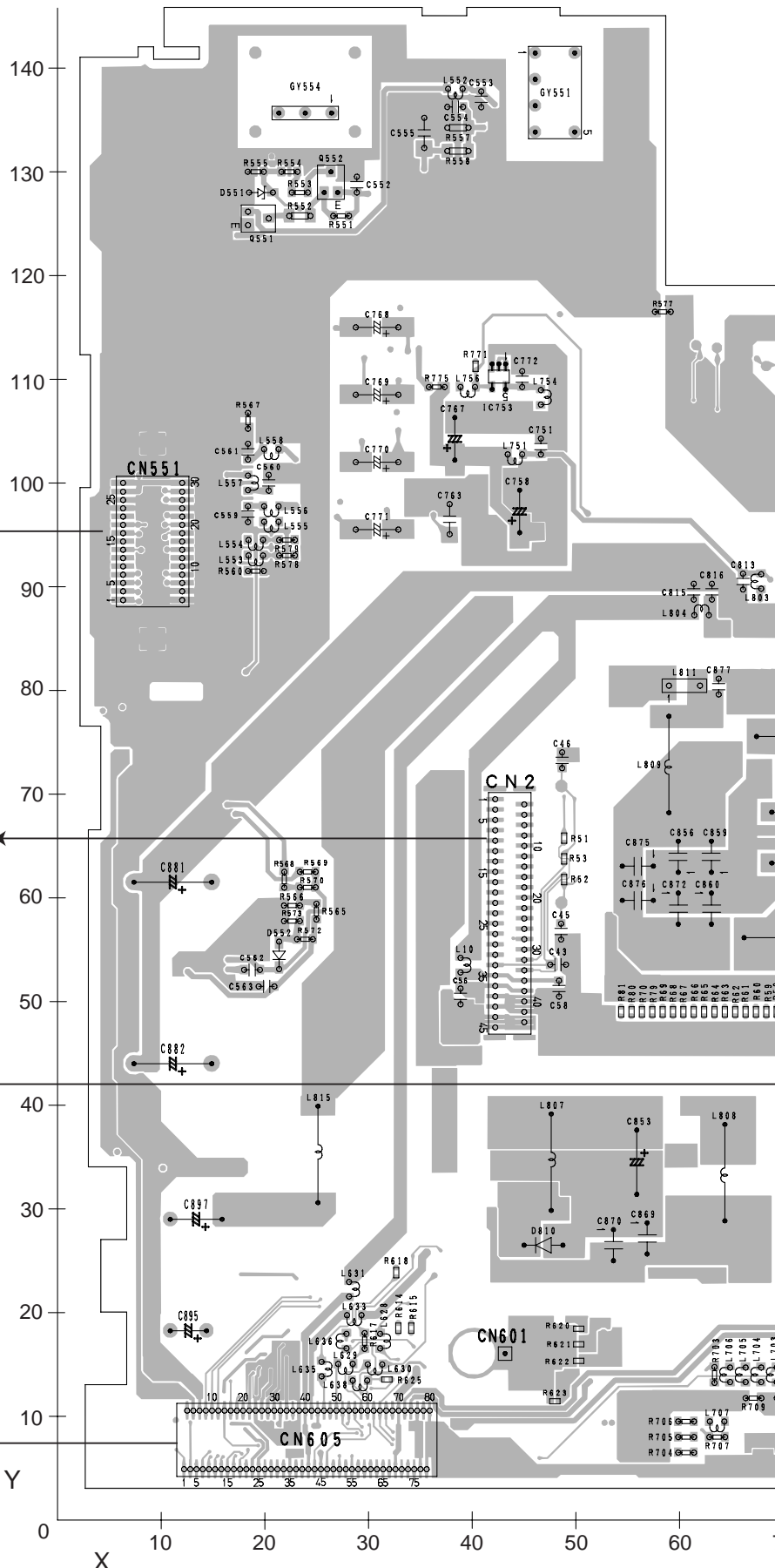
### A CC UNIT

### B CN461

### C CN601

### H CN5002

### G CN1701



AVIC-D1/UC

A



1

2

3

4

A

**A** CC UNIT

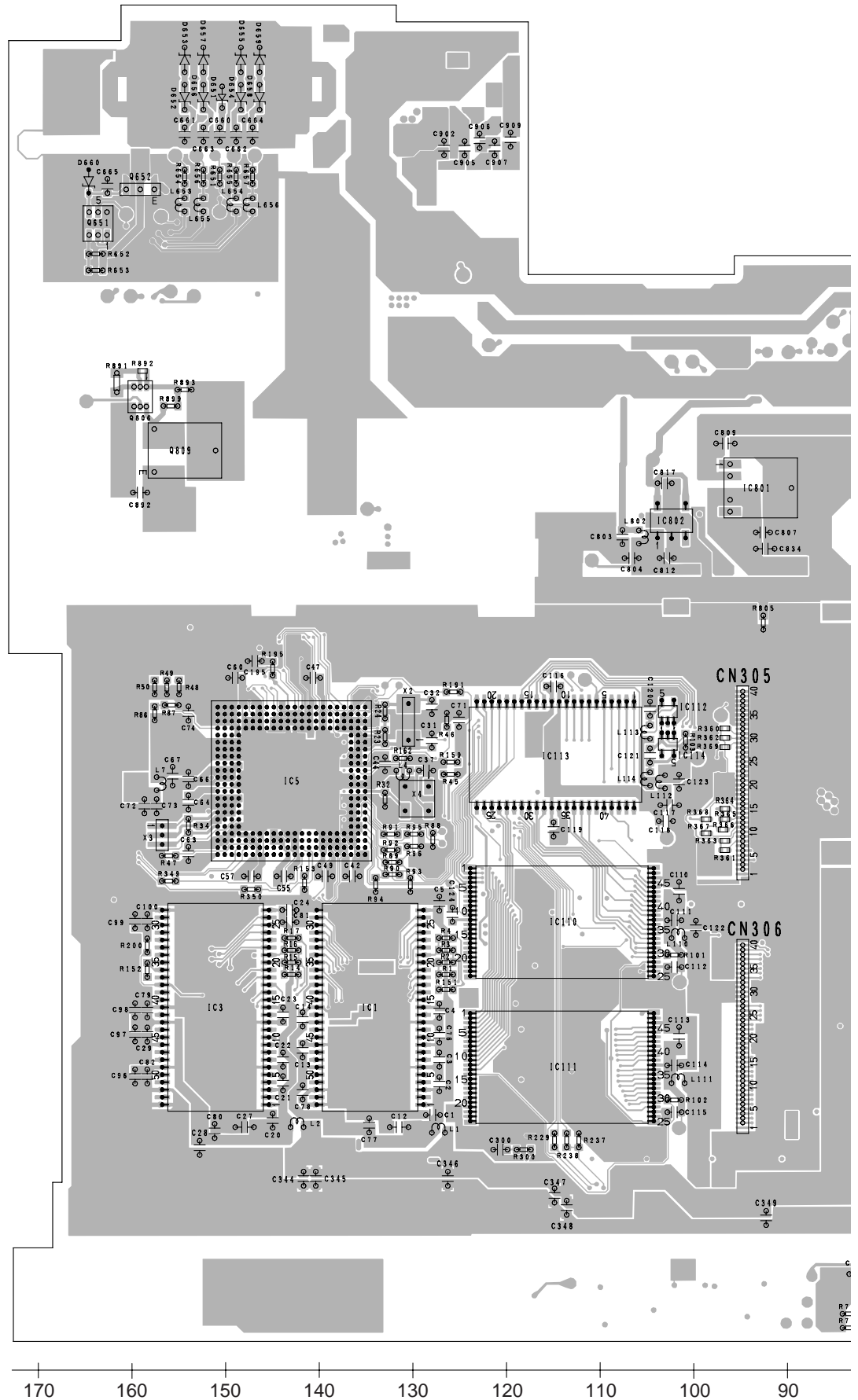
B

C

D

E

F



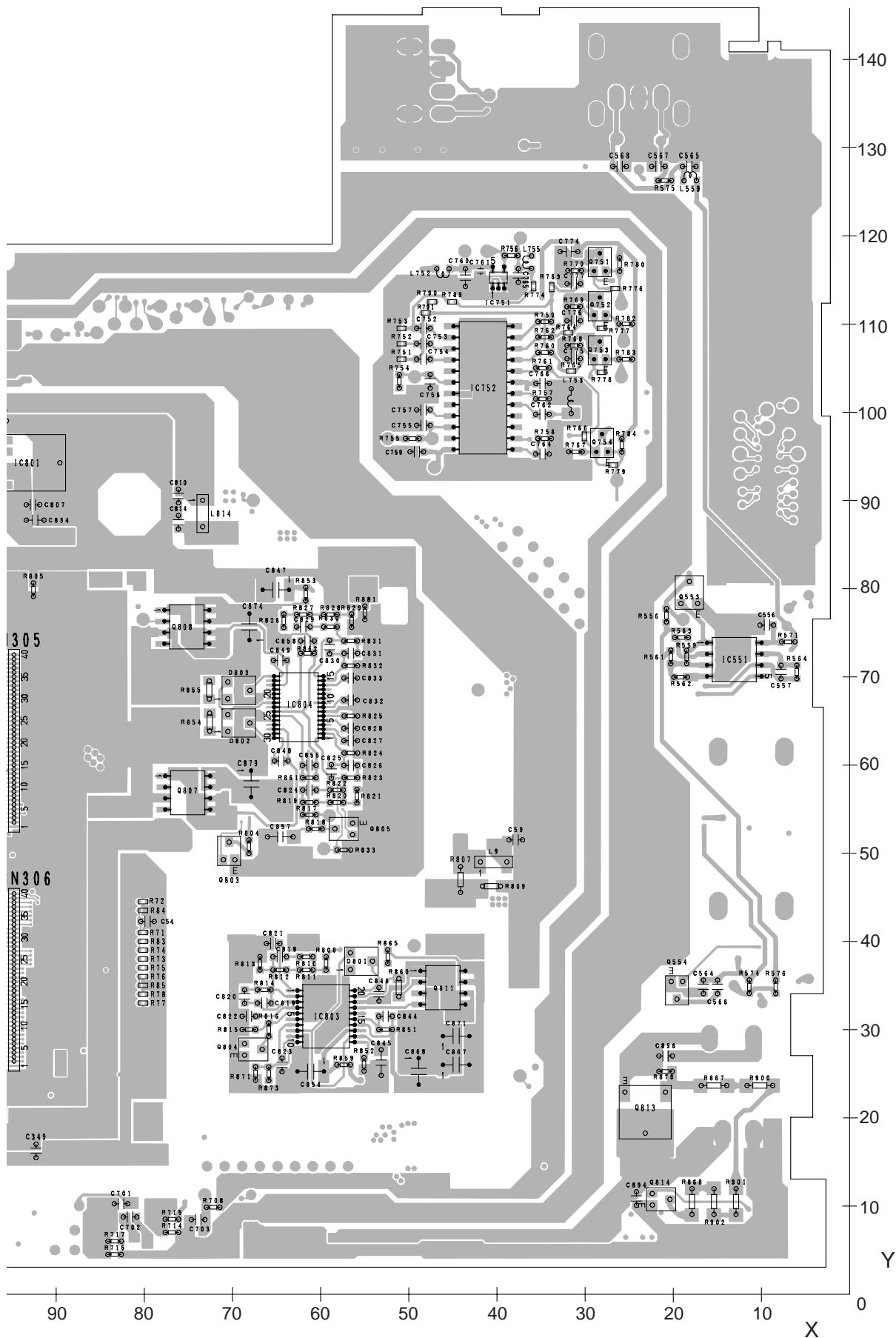
1

2

3

4

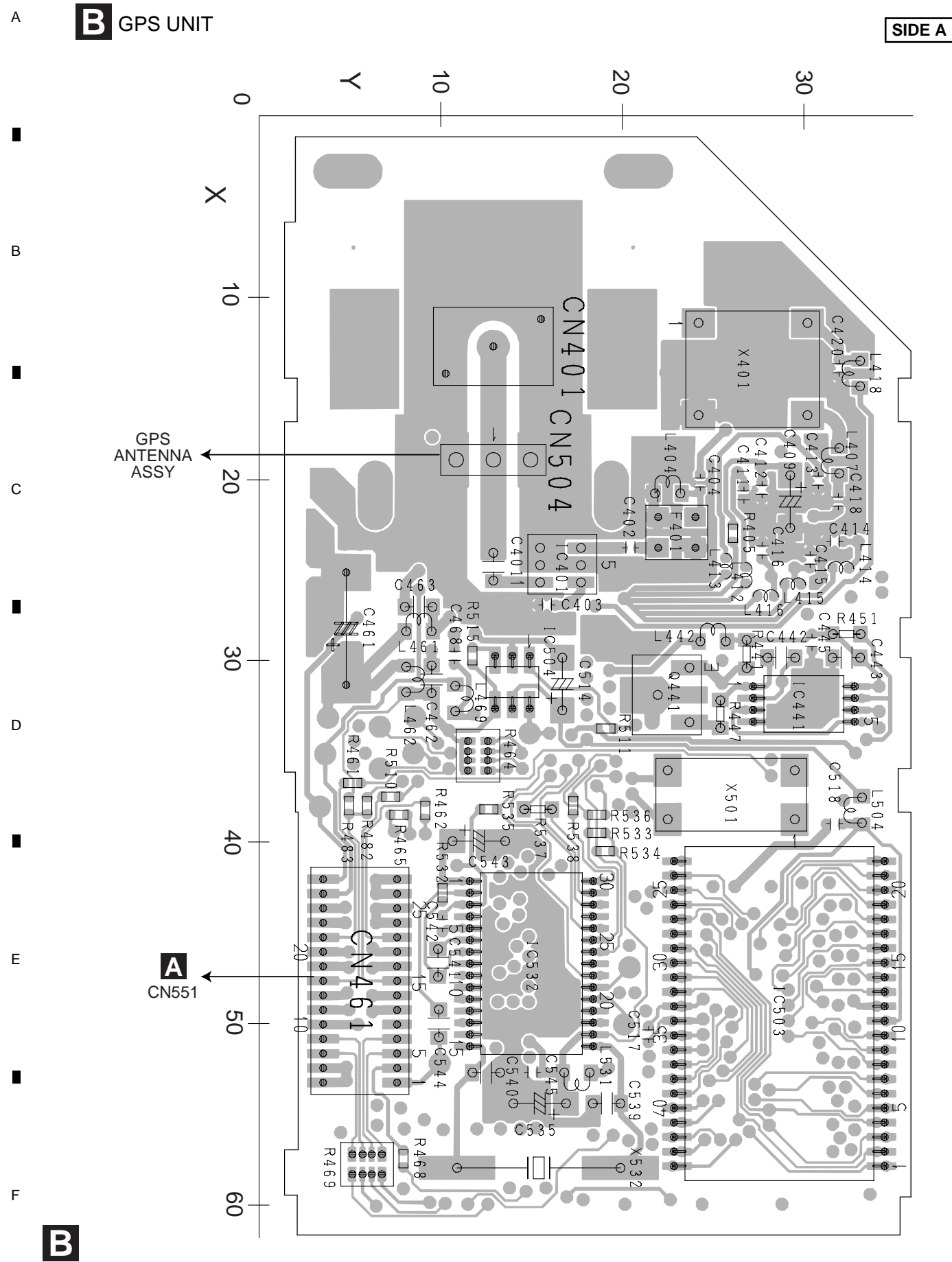
SIDE B



AVIC-D1/UC

A

4.2 GPS UNIT







## 4

C



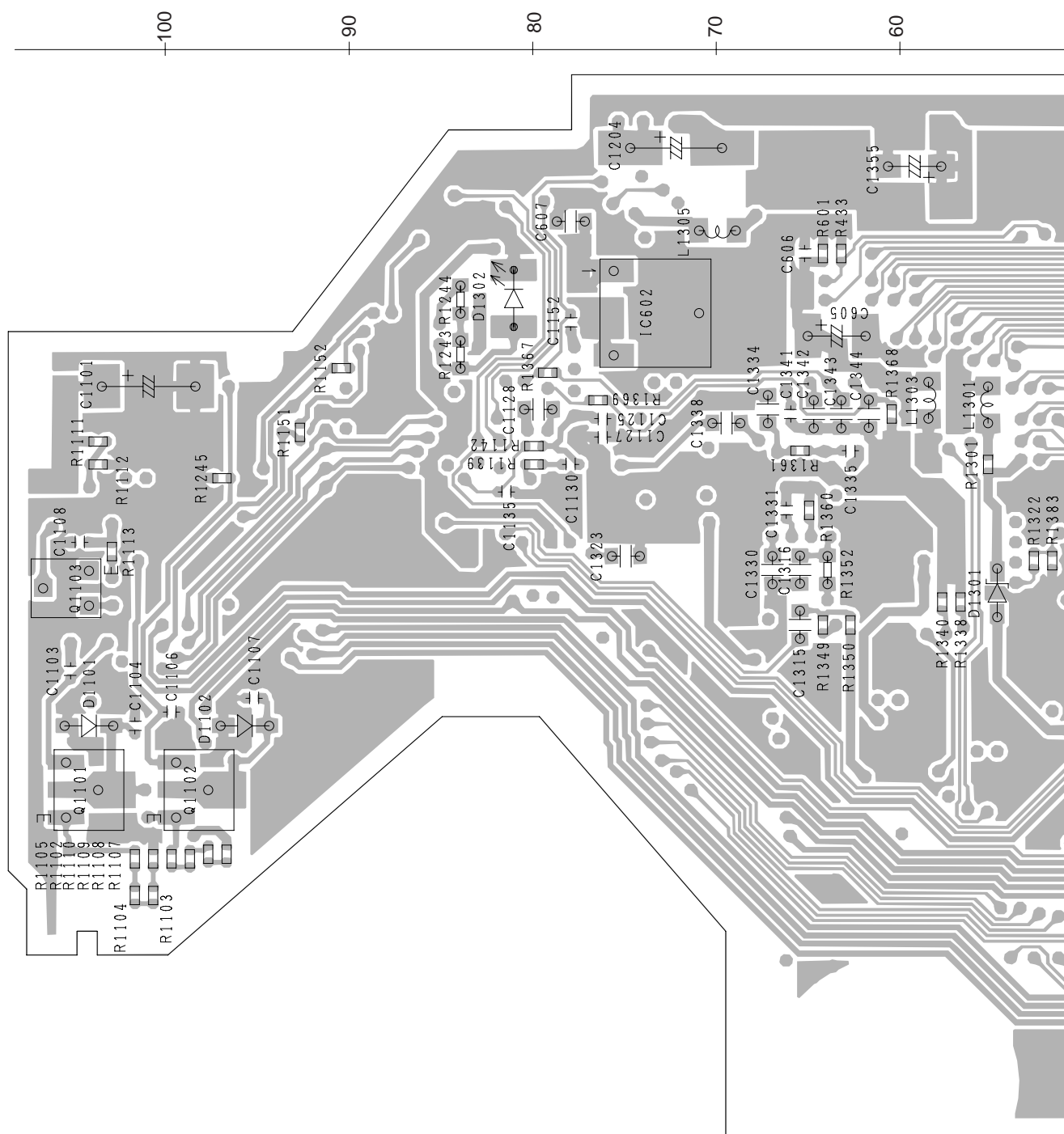


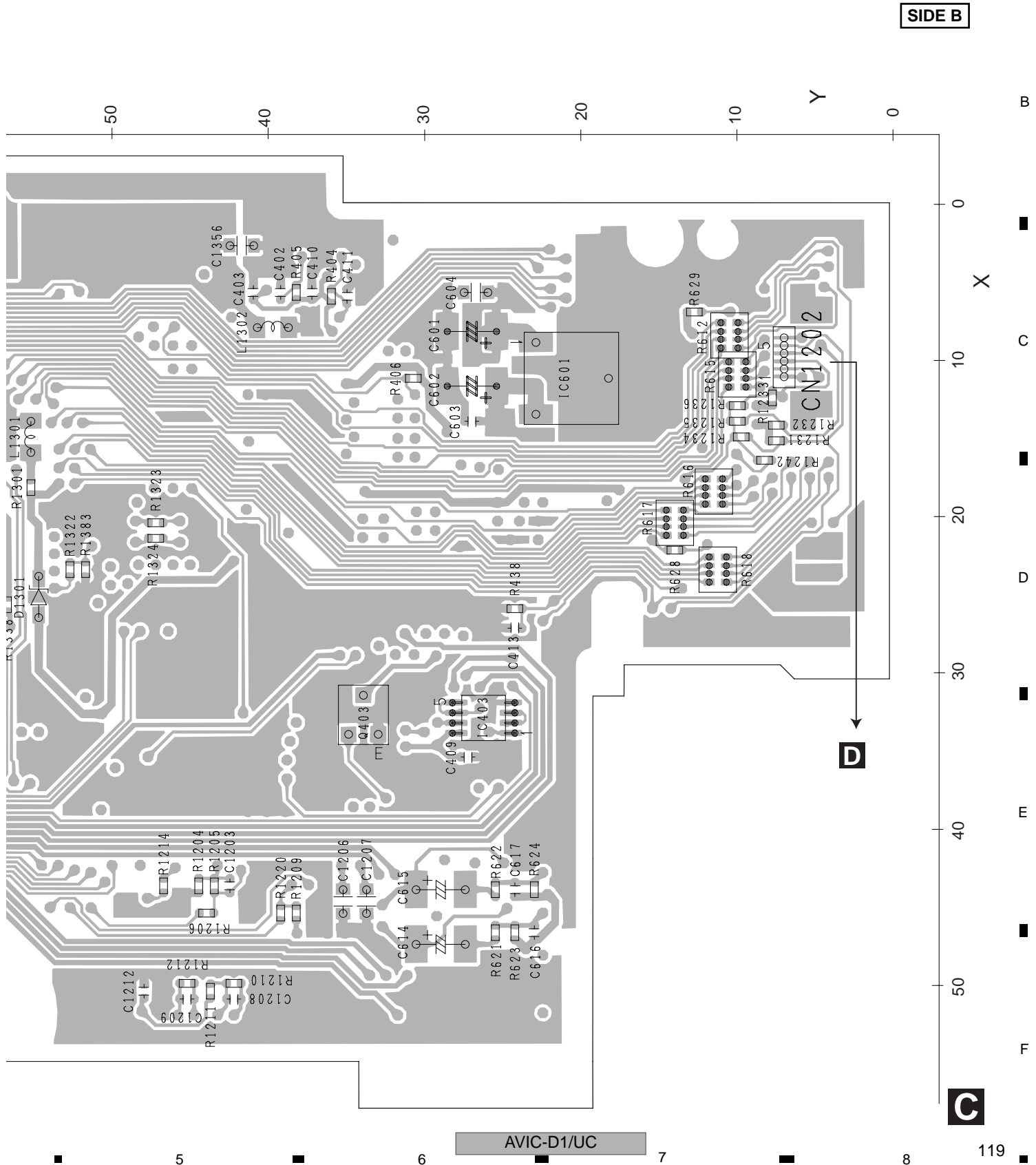
**B**

## C

E

F





1 2 3 4

# 4.4 COMPOUND UNIT(A) AND COMPOUND UNIT(B)

**D** COMPOUND UNIT(A)

**E** COMPOUND UNIT(B)

A

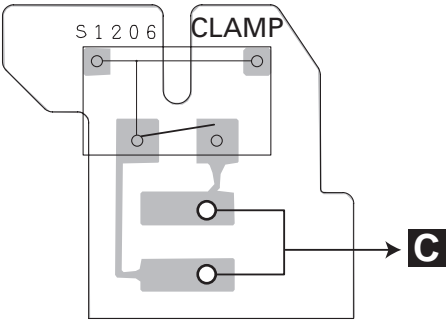
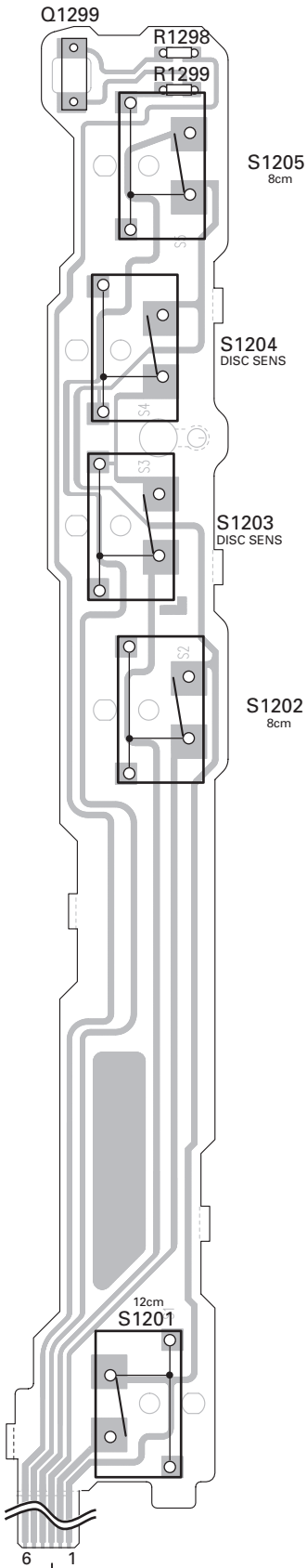
B

C

D

E

F



**C** CN1202

**D E**

■

5

■

6

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7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

121

■

AVIC-D1/UC

# 4.5 CD CORE UNIT(S10.1)

**F** CD CORE UNIT(S10.1)

**SIDE A**

A

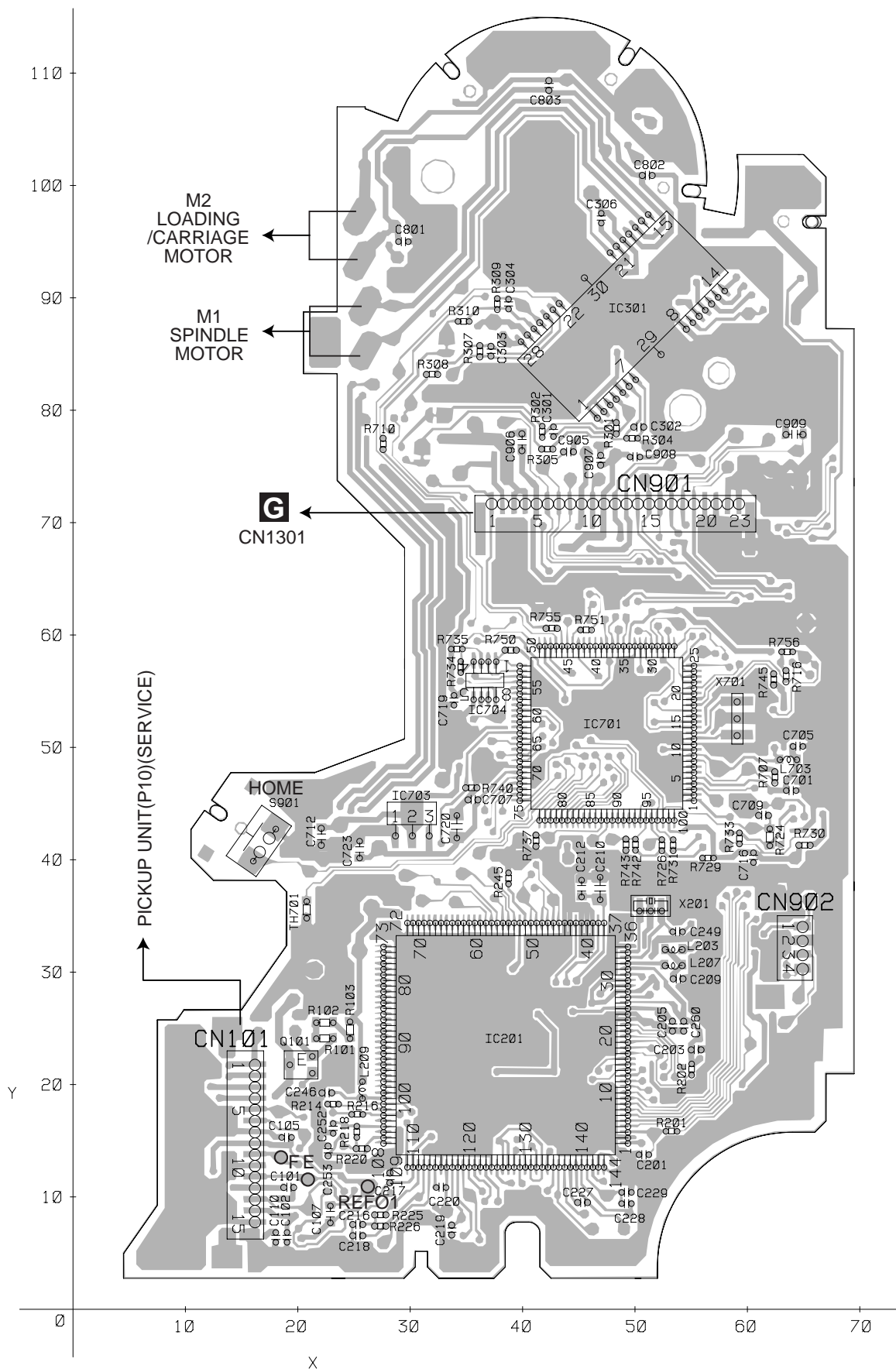
B

C

D

E

F



AVIC-D1/UC



## A



1

2

3

△

**G**



Q

□

F

F

CN5901

Y

X

AVIC-D1/UC

FRON<sup>+</sup>

1

2

33

4

SIDE A

A

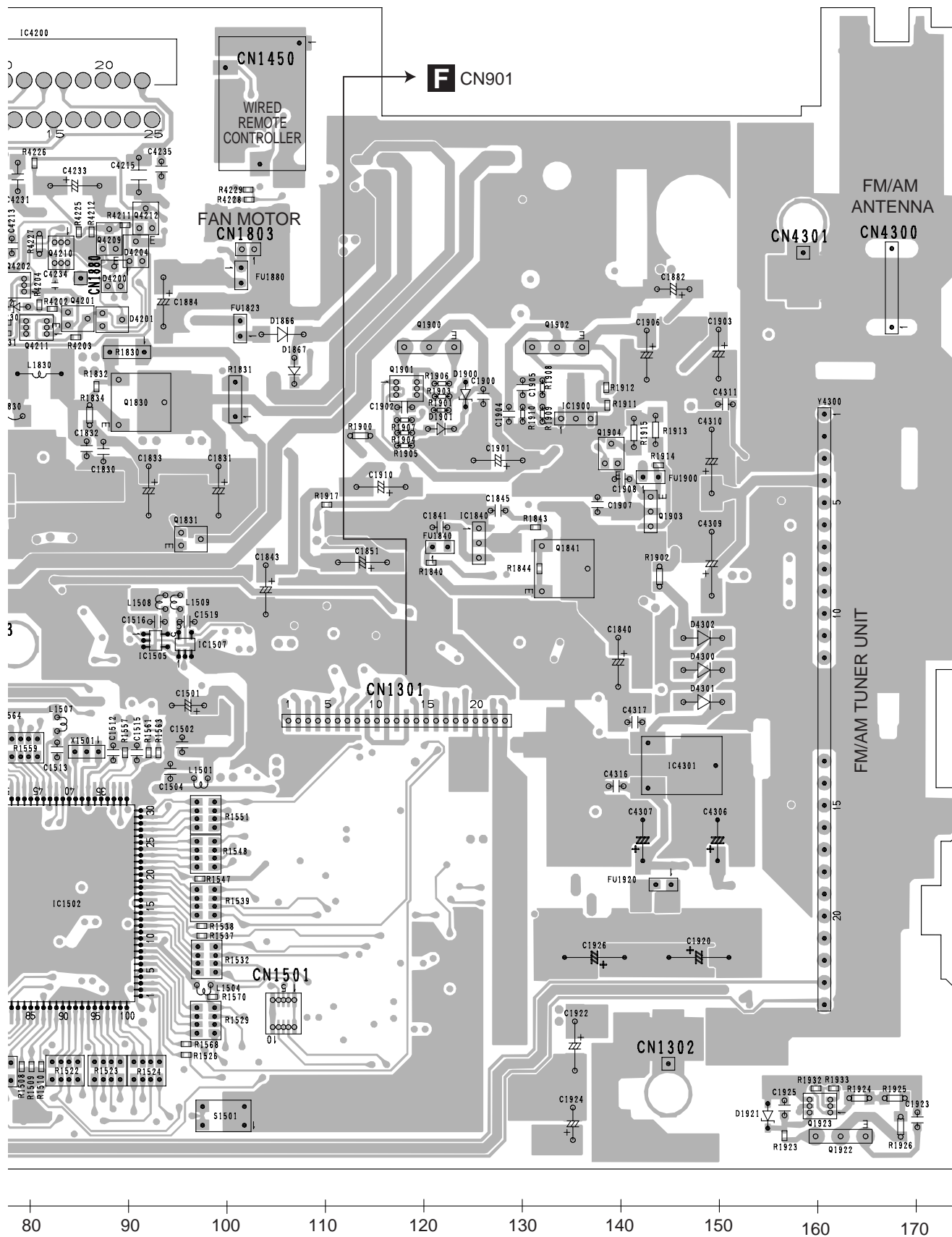
B

C

D

E

F



FRONT

AVIC-D1/UC

G

**G**



## SIDE B

A

**B**

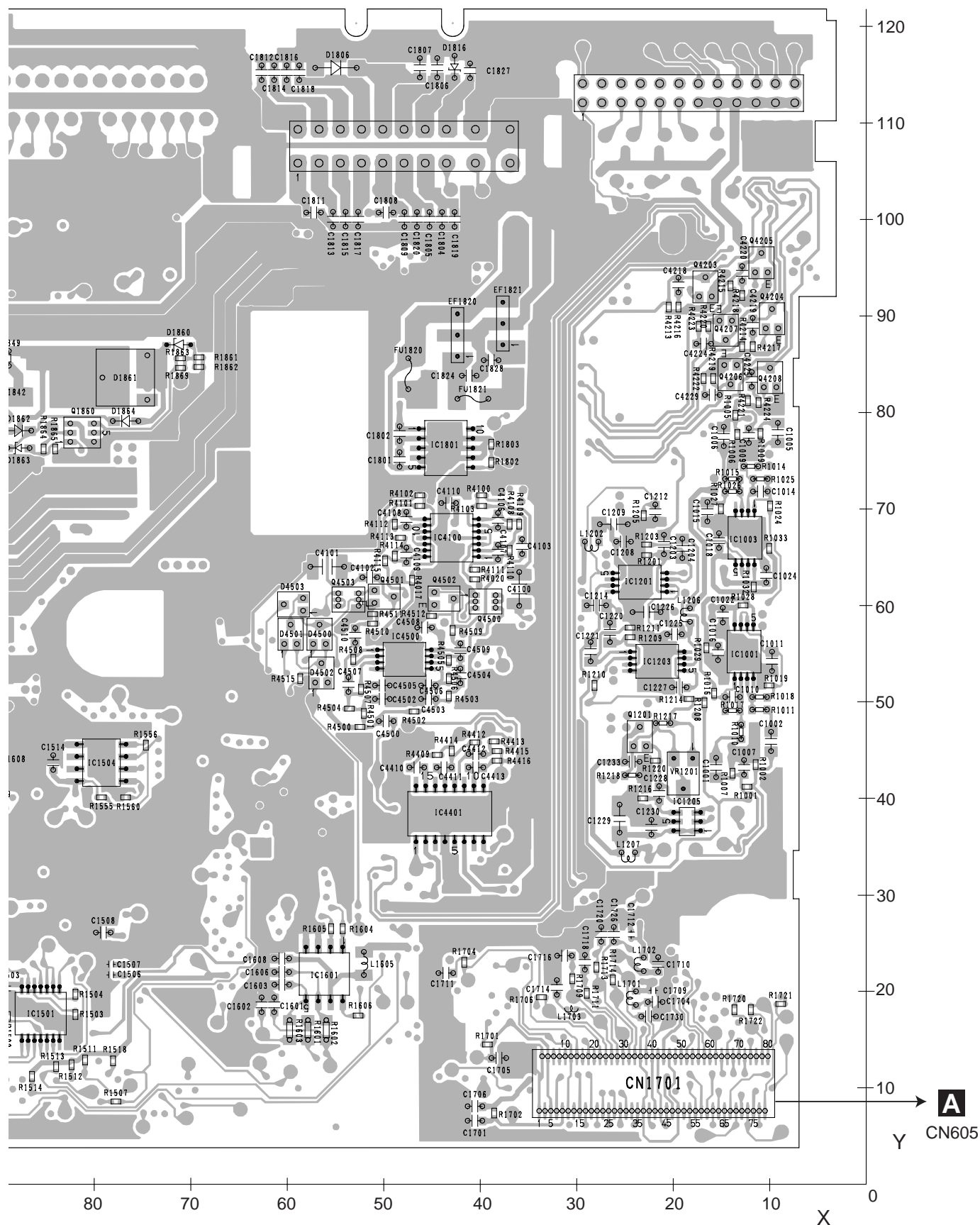
C

D

E

F

**G**





## 4

A



C

D

F

F

1

2

52

4

A



1

2

3

4

A

**H** MONITOR PCB

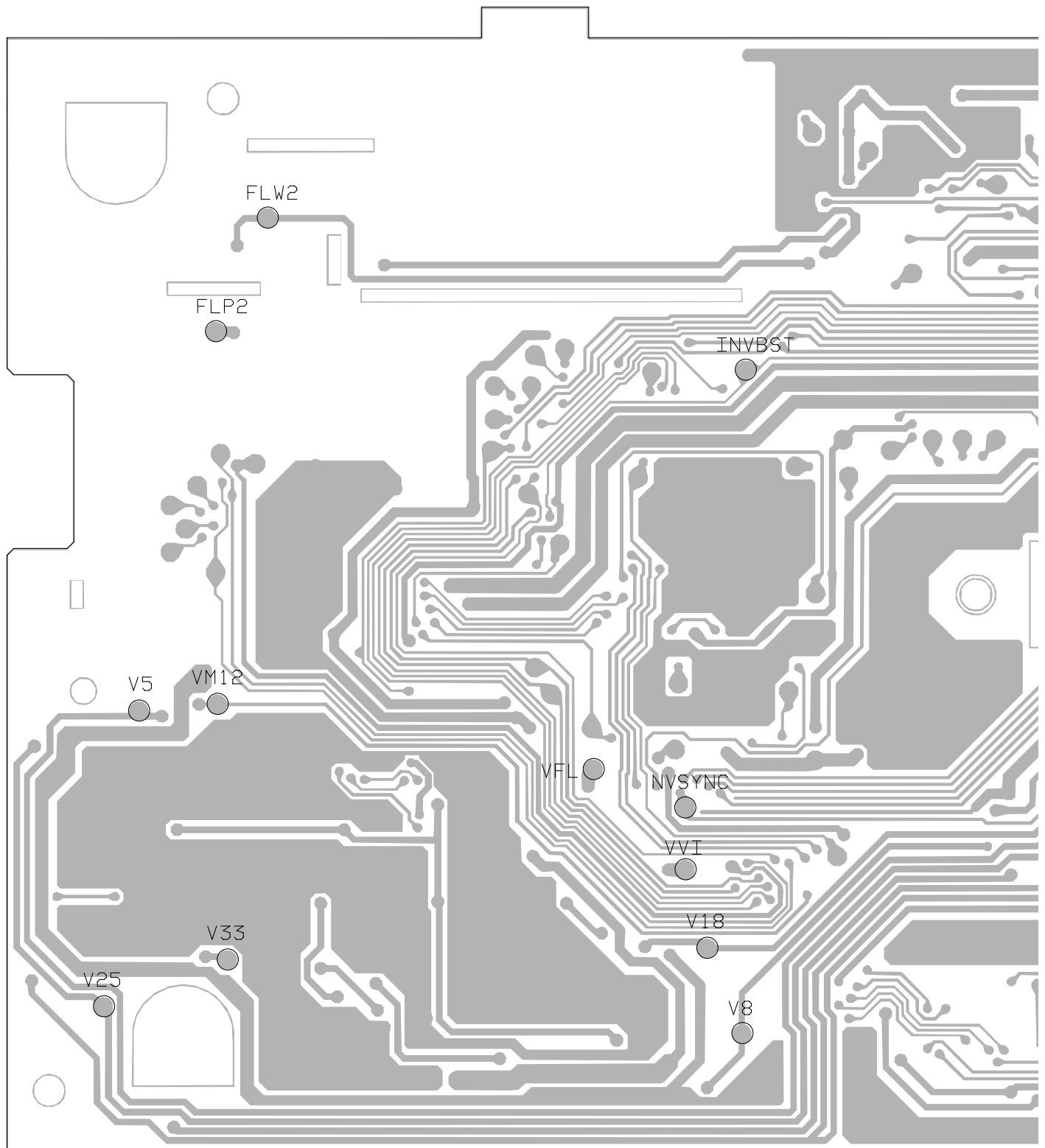
B

C

D

E

F



140

130

120

110

100

90

80

70

**H**

130

1

2

3

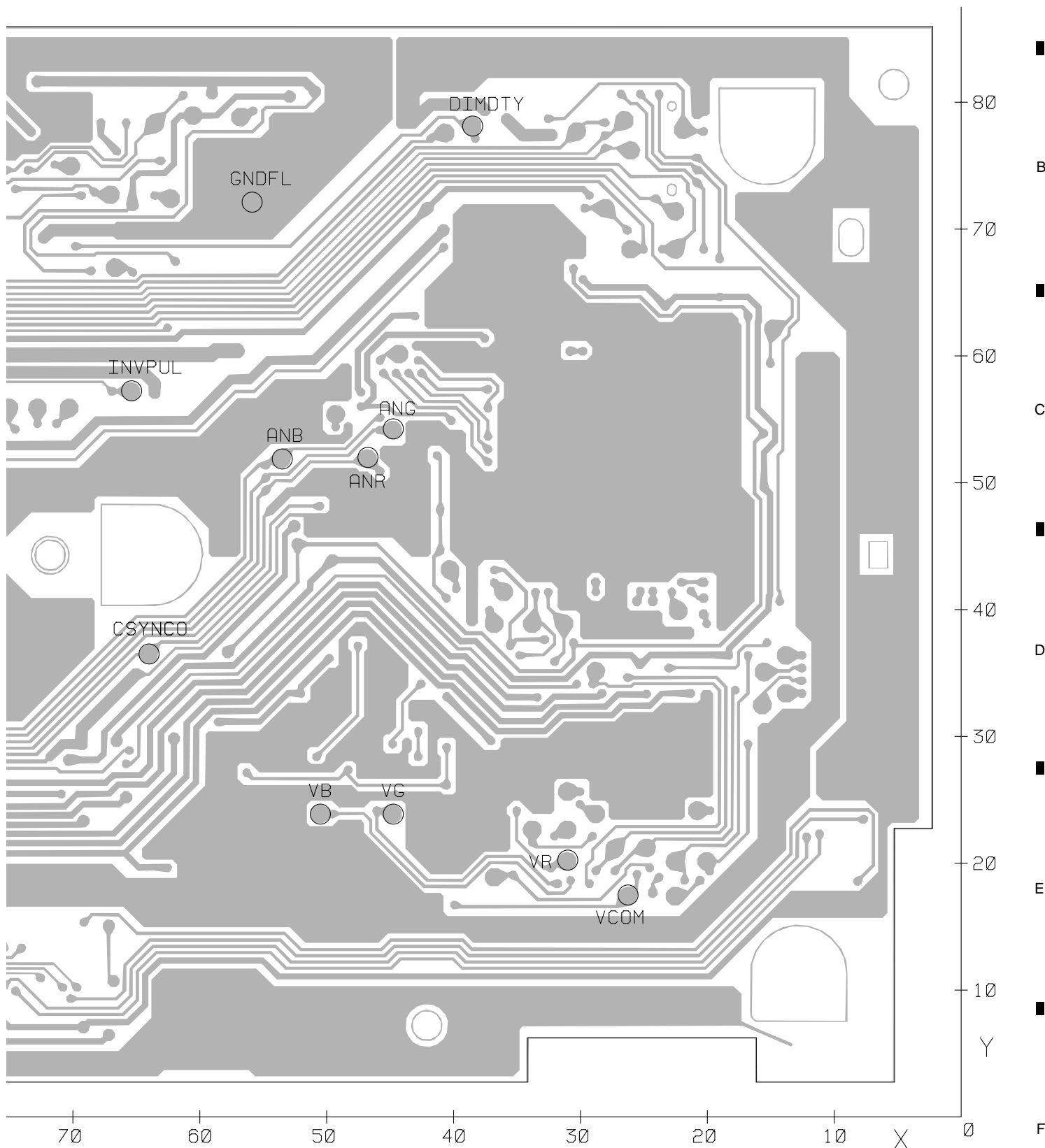
4

AVIC-D1/UC



**SIDE B**

A



B

C

D

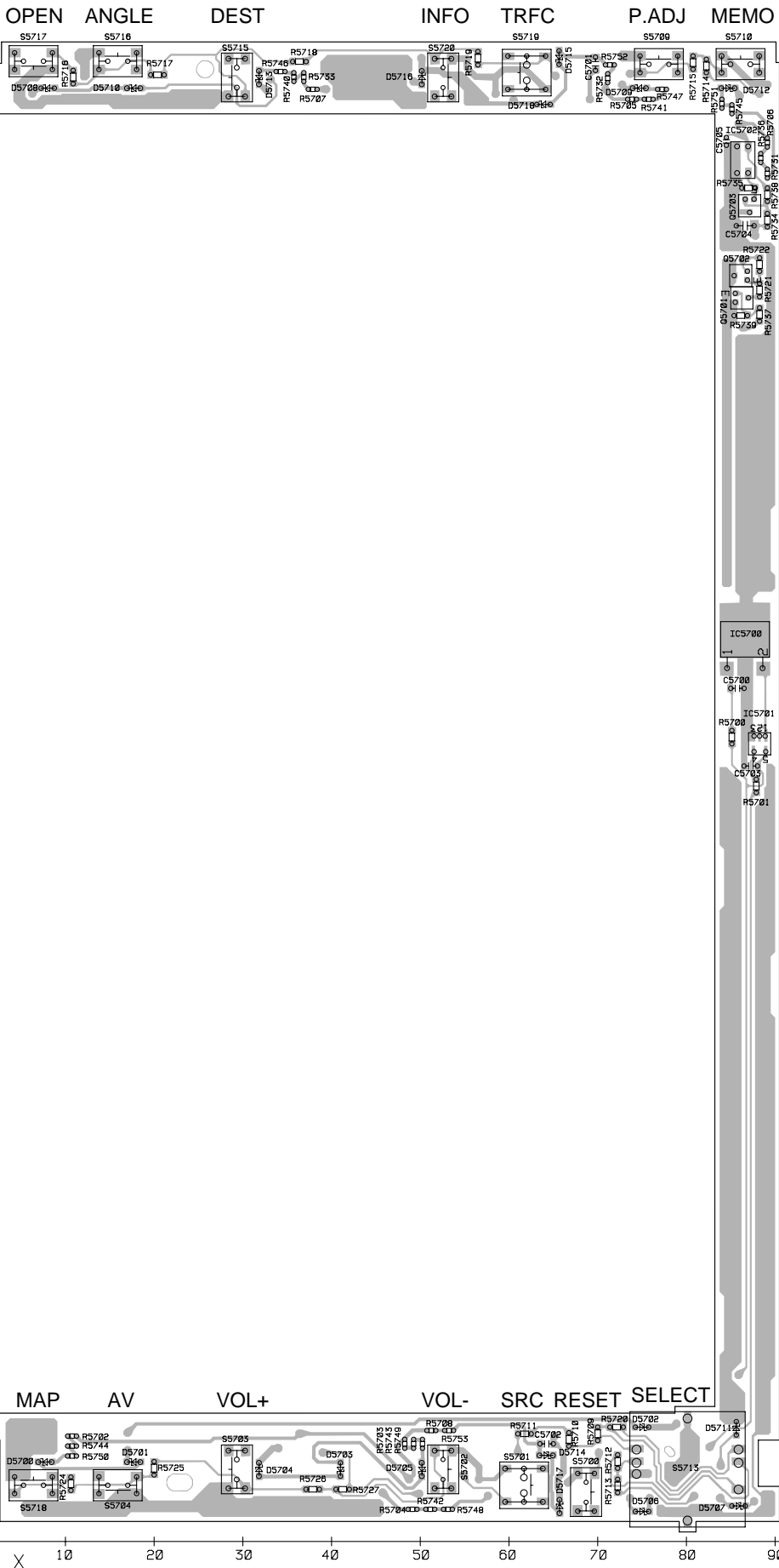
E

F

**H**

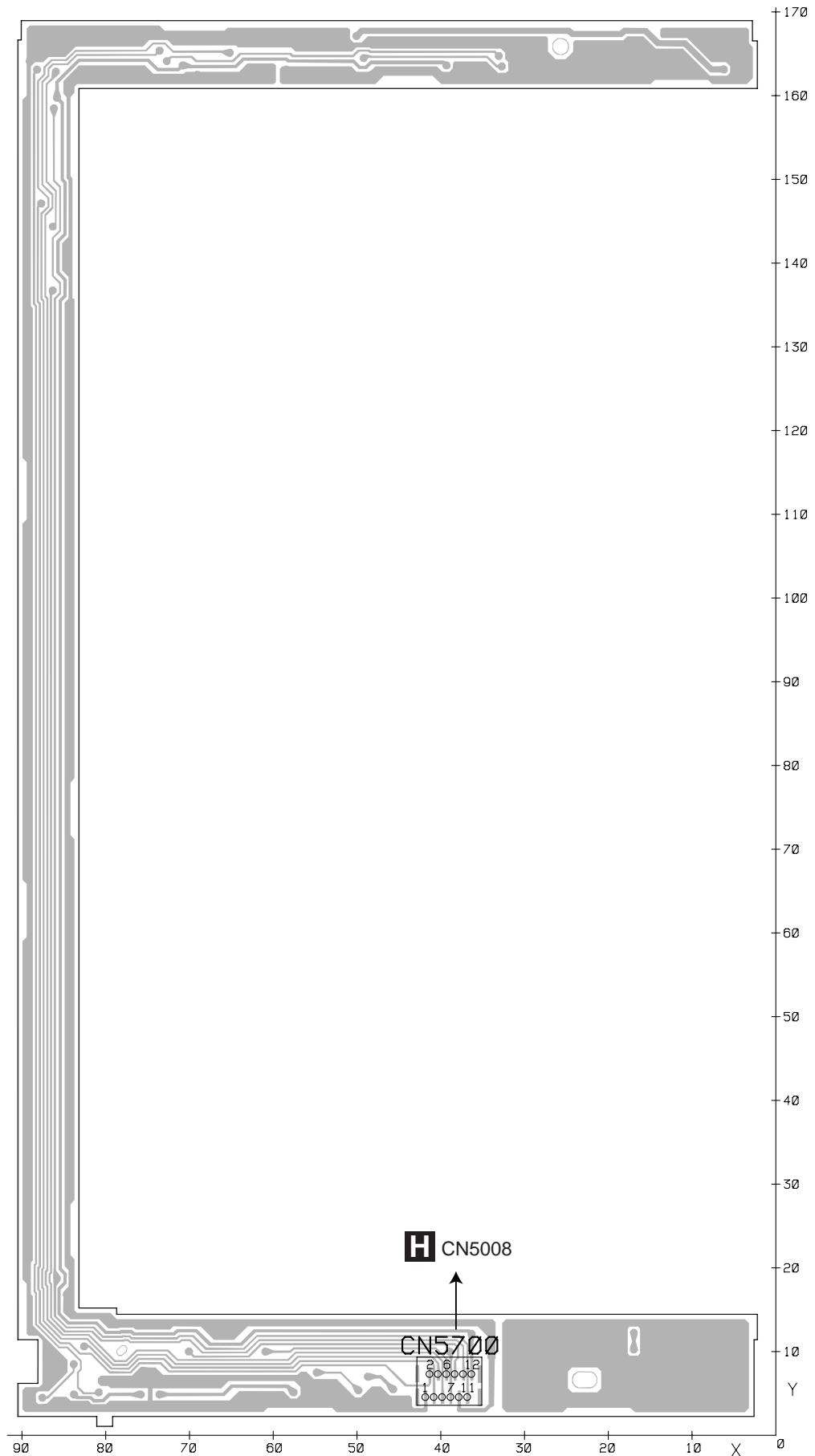
△

## F



**I** KEYBOARD PCB

**SIDE B**



AVIC-D1/UC

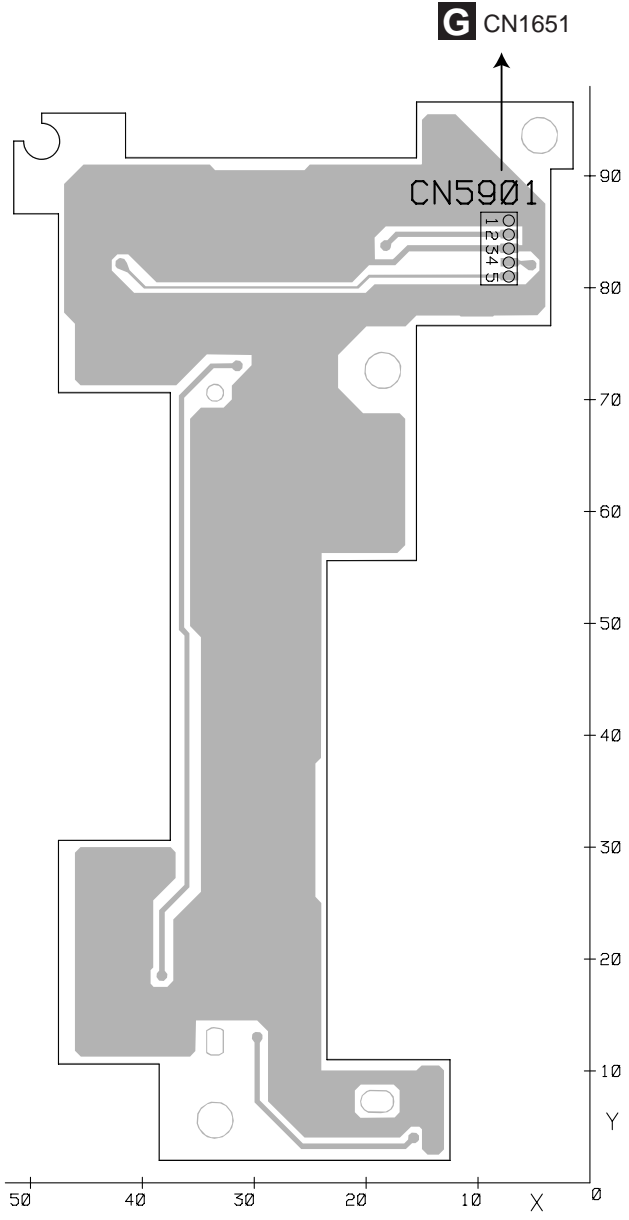
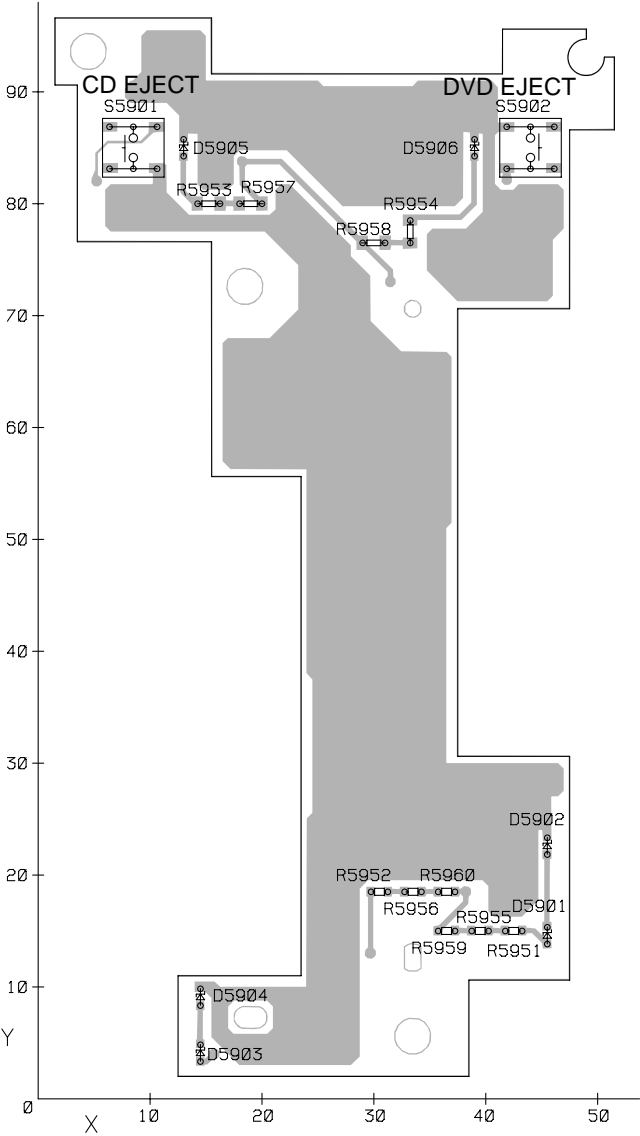
4.9 PANEL PCB

J PANEL PCB

SIDE A

J PANEL PCB

SIDE B



■

5

■

6

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7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

7

■

8

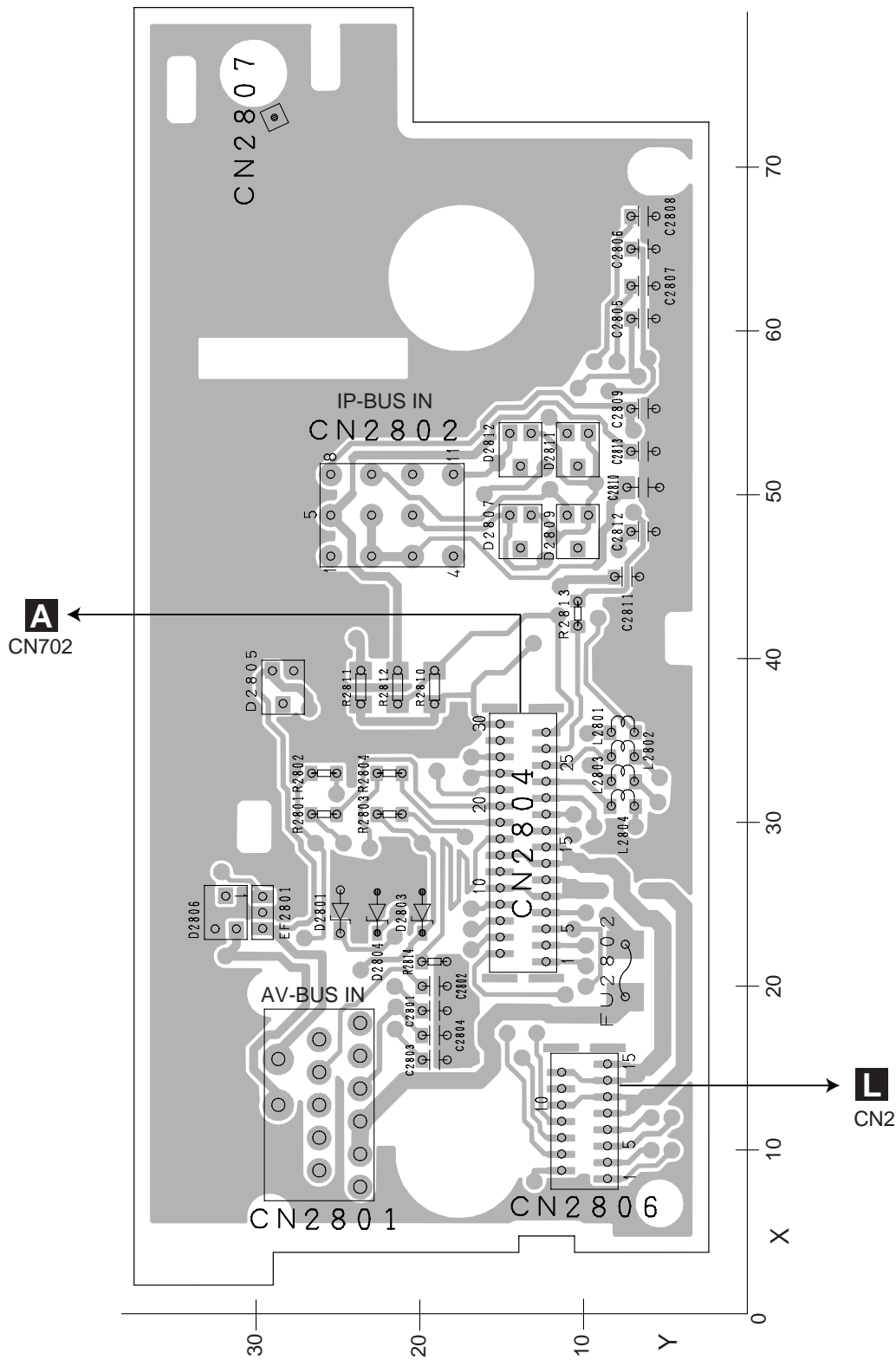
■

AVIC-D1/UC

4.10 CONNECTOR UNIT

**K** CONNECTOR UNIT

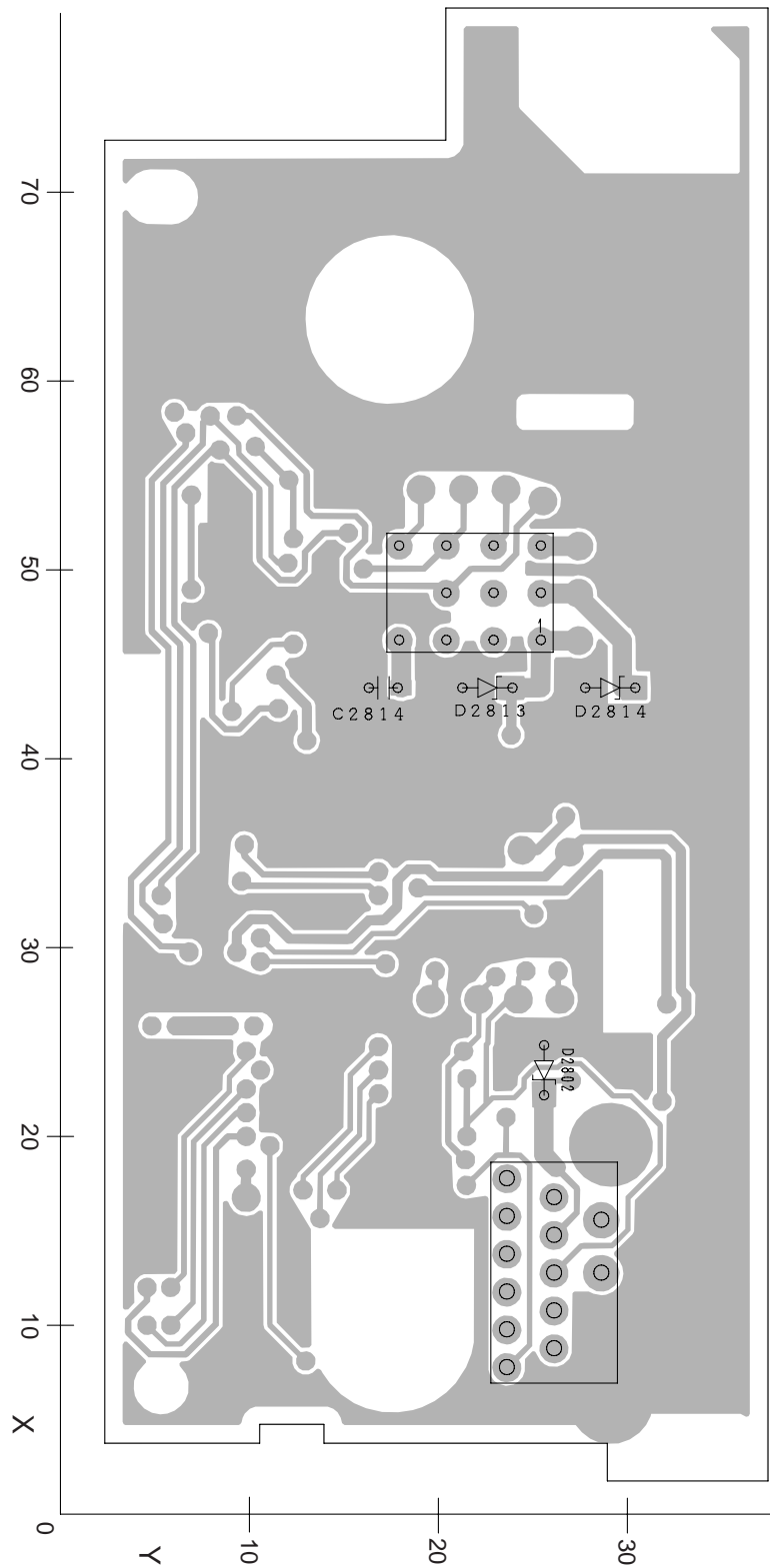
**SIDE A**



**K**

**K** CONNECTOR UNIT

**SIDE B**

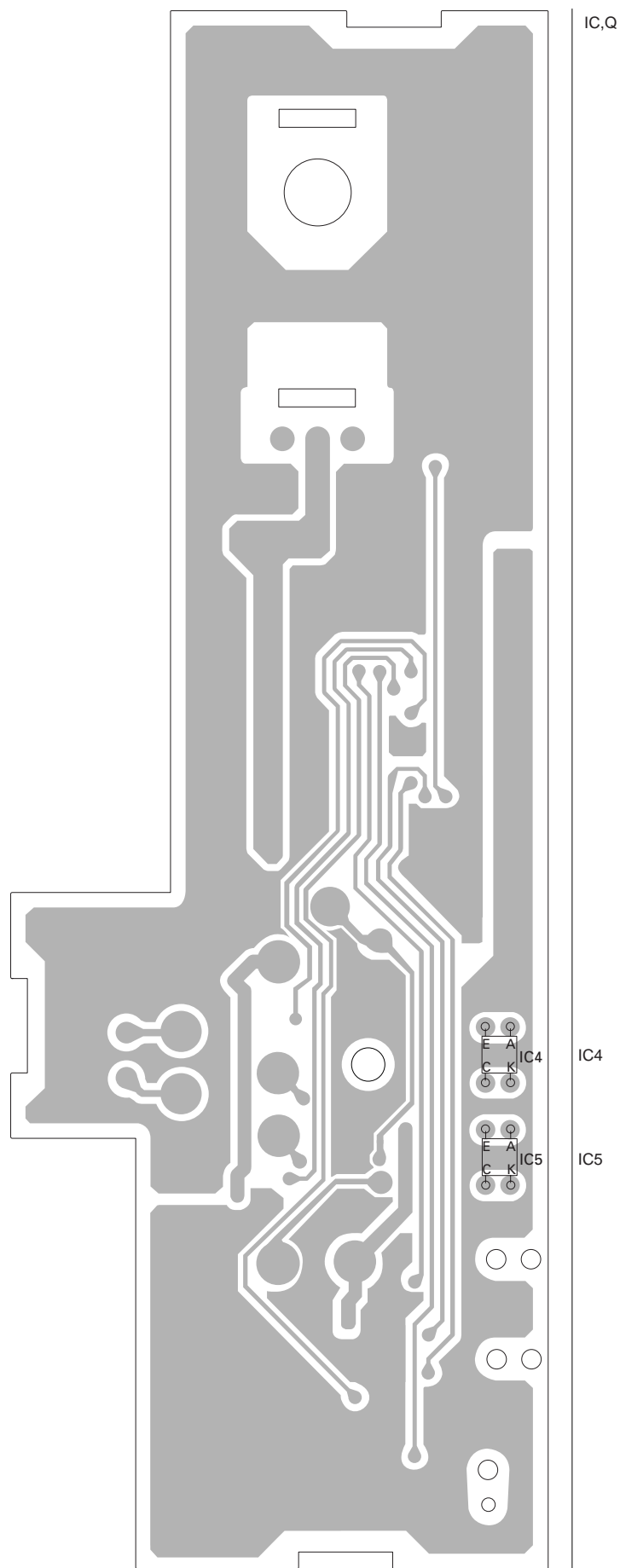


## 4

4



**L** MAIN PCB UNIT



IC,Q

IC4

IC5

AVIC-D1/UC

**L**

A

B

C

D

E

F

# 5. ELECTRICAL PARTS LIST

NOTE:


- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
			IC 804	(B,62,67) IC	TPS5102IDBT
			Q 201	(A,122,19) Transistor	UMD2N
			Q 301	(A,146,30) Transistor	DTC114EU
			Q 551	(A,19,126) Transistor	DTC114EU
			Q 552	(A,26,129) Transistor	2SA1576
			Q 553	(B,18,80) Transistor	DTC114WK
			Q 554	(B,20,34) Transistor	DTC114EU
			Q 601	(A,122,114) Transistor	IMD2A
			Q 603	(A,104,8) Transistor	2SA1576
			Q 604	(A,100,8) Transistor	2SC4081
			Q 651	(B,164,123) Transistor	IMD3A
			Q 652	(B,159,128) Transistor	2SD1767
			Q 751	(B,28,117) Transistor	2SA1576
			Q 752	(B,28,112) Transistor	2SA1576
			Q 753	(B,28,107) Transistor	2SA1576
			Q 754	(B,28,97) Transistor	2SA1576
			Q 801	(A,90,61) Transistor	2SB1184F5
			Q 802	(A,90,71) Transistor	DTC114EU
			Q 803	(B,70,50) Transistor	DTC114EU
			Q 804	(B,68,28) Transistor	DTC114EU
			Q 805	(B,57,53) Transistor	DTC114EU
			Q 806	(B,159,104) Transistor	UMF23N
			Q 807	(B,75,57) FET	RK4936
			Q 808	(B,75,76) FET	RK4936
			Q 809	(B,153,98) Transistor	2SD1760F5
			Q 811	(B,46,35) FET	RK4936
			Q 813	(B,23,18) Transistor	2SA1385-ZS1
			Q 814	(B,21,11) Transistor	DTC114EU
			D 551	(A,20,128) Diode	UDZS5R6(B)
			D 552	(A,21,54) Diode	1SS355
			D 601	(A,109,7) Diode	1SS355
			D 602	(A,94,5) Diode	1SS355
			D 603	(A,93,8) Diode	1SS355
			D 604	(A,118,9) Diode	UDZS5R6(B)
			D 651	(B,150,136) Diode	UDZS6R8(B)
			D 652	(B,154,136) Diode	UDZS20(B)
			D 653	(B,154,140) Diode	UDZS20(B)
			D 654	(B,148,136) Diode	UDZS20(B)
			D 655	(B,148,140) Diode	UDZS20(B)
			D 656	(B,152,136) Diode	UDZS20(B)
			D 657	(B,152,140) Diode	UDZS20(B)

**A**  
Unit Number:CWM9919  
Unit Name:CC Unit

## MISCELLANEOUS

IC 1	(B,135,39) IC	K4S561632E-TL75
IC 2	(A,137,59) IC	UPD705103GM-180S1
IC 3	(B,151,39) IC	HY57V561620CLT-H
IC 4	(A,154,29) IC	TC7SZ08FU
IC 5	(B,143,63) IC	PD6336C
IC 101	(A,131,26) IC	TC74LCX08FTS1
IC 102	(A,133,20) IC	TC7SH04FUS1
IC 103	(A,131,36) IC	TC74LCX245FTS1
IC 104	(A,139,36) IC	TC74LCX245FTS1
IC 105	(A,148,36) IC	TC74LCX245FTS1
IC 106	(A,156,36) IC	TC74LCX245FTS1
IC 107	(A,159,46) IC	TC74LCX541FTS1
IC 108	(A,159,54) IC	TC74LCX541FTS1
IC 109	(A,159,63) IC	TC74LCX541FTS1
IC 110	(B,114,48) IC	PEH007A
IC 111	(B,114,32) IC	PEH008A
IC 112	(B,103,70) IC	TC7SH00FUS1
IC 113	(B,115,66) IC	M5M5V216ATP-70HI
IC 114	(B,103,67) IC	TC7SH08FUS1
IC 201	(A,101,33) IC	MB86291APFVS-G-DL
IC 301	(A,140,27) IC	M51957BFP
IC 302	(A,138,19) IC	TC7SH08FUS1
IC 304	(A,105,61) IC	AK4351VT
IC 309	(A,117,57) IC	TC7SH08FUS1
IC 551	(B,13,72) IC	NJM2904M
IC 602	(A,114,8) IC	TC7SH14FUS1
IC 651	(A,155,120) IC	UPD4721GSS1
IC 751	(B,40,115) IC	TC7SH08FUS1
IC 752	(B,42,103) IC	BH7236AF
IC 753	(A,43,110) IC	TC7SH08FUS1
IC 801	(B,91,94) IC	BA25BC0WFP
IC 802	(B,102,91) IC	S-818A33AUC-BGN
IC 803	(B,59,32) IC	TPS5103IDB

5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
D 658	(B,146,136)	Diode	UDZS20(B)			L 610	(A,126,91)	Inductor	CTF1306		
D 659	(B,146,140)	Diode	UDZS20(B)			L 611	(A,128,91)	Inductor	CTF1306		
D 660	(B,165,127)	Diode	HZU8R2(B1)			L 612	(A,126,88)	Inductor	CTF1384		A
D 801	(B,55,38)	Diode	RB400D			L 613	(A,125,91)	Inductor	CTF1387		
D 802	(B,69,65)	Diode	RB400D			L 614	(A,125,88)	Inductor	CTF1334		
D 803	(B,69,68)	Diode	RB400D			L 615	(A,129,94)	Inductor	CTF1334		
D 806	(A,71,63)	Diode	RB060L-40			L 616	(A,96,79)	Inductor	CTF1306		
D 807	(A,71,68)	Diode	RB060L-40			L 617	(A,123,88)	Inductor	CTF1306		
D 810	(A,47,27)	Diode	RB060L-40			L 618	(A,123,91)	Inductor	CTF1306		
L 1	(B,127,25)	Inductor	CTF1558			L 619	(A,122,89)	Inductor	CTF1334		
L 2	(B,142,26)	Inductor	CTF1558			L 620	(A,120,92)	Inductor	CTF1334		
L 3	(A,154,25)	Inductor	CTF1410			L 621	(A,119,92)	Inductor	CTF1334		
L 5	(A,135,41)	Inductor	CTF1556			L 622	(A,119,89)	Inductor	CTF1334		
L 6	(A,123,42)	Inductor	CTF1295			L 623	(A,122,92)	Inductor	CTF1306		B
L 7	(B,157,63)	Inductor	CTF1558			L 624	(A,103,88)	Inductor	CTF1334		
L 8	(A,144,76)	Inductor	CTF1556			L 625	(A,117,93)	Inductor	CTF1306		
L 9	(B,40,49)	Inductor	CTF1453			L 626	(A,130,88)	Inductor	CTF1306		
L 10	(A,39,54)	Inductor	CTF1463			L 628	(A,31,17)	Inductor	CTF1306		
L 11	(A,128,88)	Inductor	CTF1306			L 629	(A,28,15)	Inductor	CTF1306		
L 101	(A,128,24)	Inductor	CTF1557			L 630	(A,31,15)	Inductor	CTF1306		
L 102	(A,129,20)	Inductor	CTF1557			L 631	(A,28,22)	Inductor	CTF1334		
L 103	(A,135,36)	Inductor	CTF1557			L 632	(A,119,113)	Inductor	CTF1334		
L 104	(A,144,35)	Inductor	CTF1557			L 633	(A,29,20)	Inductor	CTF1334		
L 105	(A,152,35)	Inductor	CTF1557			L 634	(A,111,5)	Inductor	CTF1334		
L 106	(A,160,35)	Inductor	CTF1557			L 635	(A,25,15)	Inductor	CTF1306		C
L 107	(A,159,42)	Inductor	CTF1557			L 636	(A,28,17)	Inductor	CTF1378		
L 108	(A,159,50)	Inductor	CTF1557			L 637	(A,112,91)	Inductor	CTF1306		
L 109	(A,159,59)	Inductor	CTF1557			L 638	(A,29,13)	Inductor	CTF1306		
L 110	(B,102,46)	Inductor	CTF1556			L 651	(A,148,116)	Inductor	CTF1410		
L 111	(B,102,31)	Inductor	CTF1556			L 653	(B,154,125)	Inductor	CTF1334		
L 112	(B,103,63)	Inductor	CTF1556			L 654	(B,149,125)	Inductor	CTF1334		
L 113	(B,105,68)	Inductor	CTF1557			L 655	(B,152,125)	Inductor	CTF1334		
L 114	(B,105,63)	Inductor	CTF1557			L 656	(B,147,125)	Inductor	CTF1334		
L 201	(A,122,37)	Inductor	CTF1556			L 657	(A,151,126)	Inductor	CTF1463		
L 203	(A,82,18)	Inductor	CTF1556			L 701	(A,72,13)	Inductor	CTF1306		
L 204	(A,101,53)	Inductor	CTF1488			L 702	(A,71,14)	Inductor	CTF1306		D
L 205	(A,119,29)	Inductor	CTF1556			L 703	(A,69,14)	Inductor	CTF1306		
L 206	(A,85,53)	Inductor	CTF1556			L 704	(A,68,14)	Inductor	CTF1334		
L 207	(A,91,51)	Inductor	CTF1379			L 705	(A,66,14)	Inductor	CTF1334		
L 301	(A,137,27)	Inductor	CTF1557			L 706	(A,65,14)	Inductor	CTF1384		
L 302	(A,140,21)	Inductor	CTF1557			L 707	(A,64,10)	Inductor	CTF1357		
L 305	(A,98,62)	Inductor	CTF1556			L 708	(A,74,103)	Inductor	CTF1306		
L 312	(A,117,60)	Inductor	CTF1410			L 709	(A,76,103)	Inductor	CTF1306		
L 552	(A,38,138)	Inductor	CTF1334			L 710	(A,77,103)	Inductor	CTF1306		
L 553	(A,19,93)	Inductor	CTF1334			L 711	(A,79,103)	Inductor	CTF1306		
L 554	(A,19,95)	Inductor	CTF1334			L 712	(A,80,103)	Inductor	CTF1306		
L 555	(A,21,96)	Inductor	CTF1334			L 713	(A,82,103)	Inductor	CTF1306		E
L 556	(A,21,98)	Inductor	CTF1463			L 714	(A,83,103)	Inductor	CTF1306		
L 557	(A,18,100)	Inductor	CTF1463			L 715	(A,80,101)	Inductor	CTF1306		
L 558	(A,21,103)	Inductor	CTF1463			L 716	(A,90,103)	Inductor	CTF1629		
L 559	(B,18,126)	Inductor	CTF1334			L 717	(A,89,100)	Inductor	CTF1384		
L 601	(A,117,90)	Inductor	CTF1334			L 751	(A,44,103)	Inductor	CTF1334		
L 602	(A,116,93)	Inductor	CTF1306			L 752	(B,46,116)	Inductor	CTF1334		
L 603	(A,116,90)	Inductor	CTF1306			L 753	(B,32,101)	Inductor	LCTAW680J3225		
L 604	(A,113,93)	Inductor	CTF1334			L 754	(A,47,108)	Inductor	CTF1334		
L 605	(A,114,90)	Inductor	CTF1334			L 755	(B,36,117)	Inductor	CTF1357		
L 606	(A,112,88)	Inductor	CTF1378			L 756	(A,40,109)	Inductor	CTF1357		F
L 607	(A,110,88)	Inductor	CTF1378			L 801	(A,134,90)	Inductor	CTF1463		
L 608	(A,109,88)	Inductor	CTF1378			L 802	(B,106,89)	Inductor	CTF1463		
L 609	(A,105,88)	Inductor	CTF1378			L 803	(A,68,91)	Inductor	CTF1306		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

L 804	(A,62,87) Inductor	CTF1463
L 805	(A,72,76) Inductor	CTH1257
L 807	(A,48,35) Inductor	CTH1254
L 808	(A,64,34) Inductor	CTH1257
L 809	(A,59,73) Inductor	CTH1253
L 810	(A,71,56) Inductor	CTH1257
L 811	(A,60,80) Inductor	CTF1453
L 814	(B,73,89) Inductor	CTF1453
L 815	(A,25,35) Inductor	CTH1262
TH601	(A,124,117) Thermistor	CCX1056
X 1	(A,139,80) Radiator 30.000MHz	CSS1633
X 2	(B,130,69) Radiator 33.000MHz	CSS1634
X 3	(B,157,57) Radiator 33.86MHz	CSS1551
X 202	(A,122,29) Radiator 14.31818MHz	CSS1632
△FU651	(A,154,126) Fuse 1A	CEK1280
△FU802	(A,80,55) Fuse 2.5A	CEK1285
△FU803	(A,81,79) Fuse 1A	CEK1280
GY551	(A,48,138) Sensor	CSX1054
GY554	(A,24,138) Sensor	CSX1089

**RESISTORS**

R 1	(B,126,42)	RS1/16S0R0J
R 3	(B,126,45)	RS1/16S0R0J
R 6	(A,117,71)	RS1/16S473J
R 7	(A,152,56)	RS1/16S220J
R 8	(A,116,78)	RS1/16S473J
R 10	(A,148,78)	RS1/16S104J
R 11	(A,151,78)	RAB4C473J
R 12	(A,141,75)	RS1/16S105J
R 13	(A,139,75)	RS1/16S151J
R 14	(B,143,42)	RS1/16S0R0J
R 16	(B,143,45)	RS1/16S0R0J
R 19	(A,117,76)	RS1/16S473J
R 20	(A,131,77)	RS1/16S101J
R 21	(A,134,74)	RS1/16S101J
R 22	(A,132,77)	RS1/16S101J
R 23	(B,133,68)	RS1/16S105J
R 24	(B,133,70)	RS1/16S151J
R 25	(A,130,77)	RS1/16S101J
R 26	(A,134,77)	RS1/16S101J
R 27	(A,130,74)	RS1/16S101J
R 28	(A,133,74)	RS1/16S101J
R 29	(A,129,74)	RS1/16S101J
R 30	(A,128,74)	RS1/16S101J
R 31	(A,128,77)	RS1/16S101J
R 32	(B,133,61)	RS1/16S473J
R 33	(A,127,77)	RS1/16S473J
R 34	(B,154,58)	RS1/16S105J
R 35	(A,123,57)	RS1/16S104J
R 36	(A,122,67)	RS1/16S101J
R 37	(A,122,68)	RS1/16S101J
R 38	(A,122,70)	RS1/16S101J
R 39	(A,122,71)	RS1/16S101J
R 40	(A,121,54)	RS1/16S470J
R 45	(B,126,64)	RS1/16S104J
R 46	(B,126,69)	RS1/16S104J
R 47	(B,156,55)	RS1/16S104J
R 48	(B,155,73)	RS1/16S104J
R 49	(B,156,73)	RS1/16S104J

R 50	(B,158,73)	RS1/16S104J
R 51	(A,49,66)	RS1/16SS0R0J
R 52	(A,49,62)	RS1/16SS101J
R 53	(A,49,64)	RS1/16SS101J
R 54	(A,73,49)	RS1/16SS101J
R 55	(A,72,49)	RS1/16SS101J
R 56	(A,71,49)	RS1/16SS101J
R 57	(A,70,49)	RS1/16SS101J
R 58	(A,69,49)	RS1/16SS101J
R 59	(A,68,49)	RS1/16SS101J
R 60	(A,67,49)	RS1/16SS101J
R 61	(A,66,49)	RS1/16SS101J
R 62	(A,65,49)	RS1/16SS101J
R 63	(A,64,49)	RS1/16SS101J
R 64	(A,63,49)	RS1/16SS101J
R 65	(A,62,49)	RS1/16SS101J
R 66	(A,61,49)	RS1/16SS101J
R 67	(A,60,49)	RS1/16SS101J
R 68	(A,59,49)	RS1/16SS101J
R 69	(A,58,49)	RS1/16SS101J
R 70	(A,56,49)	RS1/16SS101J
R 71	(B,80,41)	RS1/16SS101J
R 72	(B,80,45)	RS1/16SS101J
R 73	(B,80,38)	RS1/16SS101J
R 74	(B,80,39)	RS1/16SS101J
R 75	(B,80,37)	RS1/16SS101J
R 76	(B,80,36)	RS1/16SS101J
R 77	(B,80,33)	RS1/16SS101J
R 78	(B,80,34)	RS1/16SS101J
R 79	(A,57,49)	RS1/16SS101J
R 80	(A,55,49)	RS1/16SS101J
R 81	(A,54,49)	RS1/16SS101J
R 84	(B,80,44)	RS1/16SS562J
R 85	(B,80,35)	RS1/16SS103J
R 87	(B,156,71)	RS1/16S104J
R 88	(B,128,57)	RS1/16S104J
R 89	(B,132,54)	RS1/16S0R0J
R 90	(B,132,53)	RS1/16S0R0J
R 93	(B,130,52)	RS1/16S153J
R 94	(B,134,52)	RS1/16S153J
R 95	(B,130,57)	RS1/16S153J
R 96	(B,130,56)	RS1/16S153J
R 97	(A,118,64)	RS1/16S473J
R 98	(A,155,69)	RS1/16S473J
R 101	(B,102,44)	RS1/16S473J
R 102	(B,102,29)	RS1/16S473J
R 103	(B,101,67)	RS1/16S473J
R 104	(A,131,31)	RS1/16S220J
R 151	(B,126,41)	RS1/16S0R0J
R 152	(B,158,43)	RS1/16S0R0J
R 153	(B,142,52)	RS1/16S471J
R 154	(A,116,64)	RS1/16S473J
R 155	(A,113,64)	RS1/16S473J
R 156	(A,105,74)	RS1/16S473J
R 158	(A,118,60)	RS1/16S473J
R 159	(B,126,65)	RS1/16S473J
R 160	(A,119,69)	RS1/16S473J
R 161	(A,105,77)	RS1/16S473J
R 162	(B,131,65)	RS1/16S473J
R 163	(A,122,66)	RS1/16S560J

5		6		7		8		
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>		
R 164	(A,112,74)	RS1/16S473J		R 349	(B,156,52)	RS1/16S473J		
R 165	(A,122,78)	RS1/16S473J		R 350	(B,147,51)	RS1/16S473J		
R 166	(A,104,77)	RS1/16S473J		R 356	(A,91,74)	RS1/16S0R0J		A
R 167	(A,117,72)	RS1/16S473J		R 360	(B,97,69)	RS1/16SS473J		
R 170	(A,107,74)	RS1/16S473J		R 361	(B,97,56)	RS1/16SS473J		
R 171	(A,109,74)	RS1/16S473J		R 362	(B,97,68)	RS1/16SS473J		
R 172	(A,108,74)	RS1/16S473J		R 363	(B,97,57)	RS1/16SS473J		
R 174	(A,122,75)	RS1/16S473J		R 364	(B,97,60)	RS1/16SS473J		
R 175	(A,122,76)	RS1/16S473J		R 365	(B,97,59)	RS1/16SS473J		
R 176	(A,122,65)	RS1/16S0R0J		R 366	(B,97,58)	RS1/16SS473J		
R 177	(A,117,74)	RS1/16S473J		R 367	(B,99,57)	RS1/16SS473J		
R 178	(A,117,75)	RS1/16S473J		R 368	(B,99,59)	RS1/16SS473J		
R 179	(A,110,71)	RS1/16S473J		R 369	(B,97,67)	RS1/16SS473J		
R 180	(A,145,74)	RS1/16S101J		R 551	(A,27,126)	RS1/16S103J		B
R 181	(A,114,64)	RS1/16S473J		R 552	(A,23,126)	RS1/10S103J		
R 183	(A,114,71)	RS1/16S473J		R 553	(A,23,128)	RN1/16SE1001D		
R 184	(A,114,67)	RS1/16S473J		R 554	(A,22,130)	RN1/16SE1101D		
R 185	(A,112,71)	RS1/16S473J		R 555	(A,19,130)	RN1/16SE1001D		
R 186	(A,113,67)	RS1/16S473J		R 557	(A,39,134)	RS1/10S105J		
R 187	(A,112,67)	RS1/16S473J		R 558	(A,39,132)	RS1/10S151J		
R 188	(A,107,77)	RS1/16S473J		R 559	(B,18,72)	RS1/16S104J		
R 189	(A,108,77)	RS1/16S473J		R 560	(A,19,92)	RS1/16S104J		
R 190	(A,109,77)	RS1/16S473J		R 561	(B,20,72)	RS1/16S473J		
R 191	(B,126,72)	RS1/16S473J		R 562	(B,19,70)	RS1/16S563J		
R 192	(A,113,71)	RS1/16S473J		R 563	(B,19,74)	RS1/16S513J		C
R 193	(A,123,74)	RS1/16S473J		R 564	(B,6,71)	RS1/16S104J		
R 194	(A,146,76)	RS1/16S390J		R 565	(A,25,59)	RS1/16S102J		
R 196	(A,112,77)	RS1/16S473J		R 566	(A,23,59)	RS1/16S102J		
R 198	(A,124,72)	RS1/16SS473J		R 567	(A,18,106)	RS1/16S0R0J		
R 199	(A,117,81)	RS1/16SS473J		R 568	(A,22,62)	RS1/16S513J		
R 201	(A,120,49)	RN1/16SE1502D		R 569	(A,24,63)	RS1/16S513J		
R 202	(A,120,48)	RN1/16SE1202D		R 570	(A,24,61)	RS1/16S564J		
R 210	(A,98,51)	RS1/16S104J		R 571	(B,7,74)	RS1/16S0R0J		
R 211	(A,97,51)	RS1/16S104J		R 572	(A,24,56)	RS1/16S822J		
R 212	(A,90,51)	RS1/16S104J		R 573	(A,23,58)	RS1/16S202J		
R 213	(A,88,51)	RS1/16S104J		R 574	(B,11,35)	RS1/16S203J		D
R 217	(A,121,44)	RS1/16S272J		R 576	(B,8,35)	RS1/16S333J		
R 220	(A,122,16)	RS1/16S223J		R 577	(A,58,117)	RS1/16S0R0J		
R 221	(A,121,34)	RS1/16S105J		R 578	(A,22,93)	RS1/16S0R0J		
R 222	(A,122,25)	RS1/16S151J		R 579	(A,22,95)	RS1/16S0R0J		
R 224	(A,79,24)	RS1/16S0R0J		R 601	(A,107,88)	RS1/16S0R0J		
R 225	(A,117,17)	RS1/16S104J		R 602	(A,121,117)	RS1/16S1803D		
R 226	(A,118,17)	RS1/16S104J		R 603	(A,126,114)	RS1/16SS1603F		
R 227	(A,79,27)	RS1/16S104J		R 604	(A,126,117)	RS1/16S1002F		
R 228	(A,80,27)	RS1/16S104J		R 605	(A,115,96)	RS1/16S101J		
R 229	(B,115,25)	RS1/16S560J		R 606	(A,127,93)	RS1/16S470J		E
R 230	(A,80,22)	RS1/16S104J		R 607	(A,107,8)	RS1/16S473J		
R 232	(A,82,22)	RS1/16S104J		R 608	(A,106,6)	RS1/16S473J		
R 237	(B,112,25)	RS1/16S104J		R 609	(A,103,5)	RS1/16S473J		
R 238	(B,114,25)	RS1/16S330J		R 610	(A,100,5)	RS1/16S473J		
R 240	(A,114,16)	RS1/16S104J		R 611	(A,95,8)	RS1/16S472J		
R 301	(A,135,27)	RS1/16S123J		R 612	(A,125,94)	RS1/16S101J		
R 302	(A,135,30)	RS1/16S103J		R 613	(A,123,94)	RS1/16S101J		
R 303	(A,137,25)	RS1/16S473J		R 614	(A,33,19)	RS1/16SS0R0J		
R 320	(A,106,65)	RS1/16S103J		R 615	(A,34,19)	RS1/16SS0R0J		
R 328	(A,105,67)	RS1/16S101J		R 616	(A,129,90)	RS1/16SS101J		
R 329	(A,110,62)	RS1/16SS821J		R 617	(A,30,17)	RS1/16S101J		F
R 330	(A,110,58)	RS1/16SS221J		R 618	(A,33,24)	RS1/16SS101J		
R 331	(A,110,60)	RS1/16SS221J		R 620	(A,50,18)	RS1/16SS0R0J		
R 332	(A,110,59)	RS1/16SS472J		R 622	(A,50,15)	RS1/16SS0R0J		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

R 623 (A,48,11) RS1/16SS0R0J  
R 624 (A,118,10) RS1/16S0R0J

R 815 (B,68,30) RS1/16S1003D  
R 816 (B,66,30) RS1/16S6803D

A R 625 (A,32,14) RS1/16SS0R0J  
R 626 (A,117,7) RS1/16SS0R0J  
R 651 (B,151,128) RS1/16S681J  
R 652 (B,164,119) RS1/16S471J  
R 653 (B,164,118) RS1/16S471J

R 817 (B,61,54) RS1/16S0R0J  
R 818 (B,61,53) RS1/16S473J  
R 819 (B,61,56) RS1/16S3300D  
R 820 (B,58,56) RS1/16S1002D  
R 821 (B,56,56) RS1/16S5601D

R 654 (B,154,128) RS1/16S681J  
R 655 (B,149,128) RS1/16S681J  
R 656 (B,152,128) RS1/16S681J  
R 657 (B,147,128) RS1/16S681J  
R 701 (A,72,17) RS1/16S0R0J

R 822 (B,58,57) RS1/16S331J  
R 823 (B,57,59) RS1/16S152J  
R 824 (B,57,61) RS1/16S104J  
R 825 (B,57,66) RS1/16S1003D  
R 826 (B,64,76) RS1/16S0R0J

B R 702 (A,71,17) RS1/16S0R0J  
R 703 (A,63,14) RS1/16S0R0J  
R 704 (A,61,7) RS1/16S0R0J  
R 705 (A,61,8) RS1/16S0R0J  
R 706 (A,61,10) RS1/16S0R0J

R 827 (B,62,77) RS1/16S6800D  
R 828 (B,59,77) RS1/16S1002D  
R 829 (B,56,76) RS1/16S3301D  
R 830 (B,59,76) RS1/16S331J  
R 831 (B,57,74) RS1/16S332J

R 707 (A,64,8) RS1/16S0R0J  
R 708 (B,72,10) RS1/16S0R0J  
R 709 (A,67,12) RS1/16S0R0J  
R 710 (A,92,103) RS1/16S101J  
R 711 (A,80,99) RS1/16S101J

R 832 (B,57,71) RS1/16S104J  
R 851 (B,53,30) RS1/16S184J  
R 853 (B,62,79) RS1/16S100J  
R 854 (B,73,65) RS1/10S150J  
R 855 (B,73,69) RS1/10S150J

C R 712 (A,83,101) RS1/16S101J  
R 715 (B,77,9) RS1/16S0R0J  
R 717 (B,83,6) RS1/16S0R0J  
R 751 (B,51,106) RS1/16SS101J  
R 752 (B,51,108) RS1/16SS101J

R 859 (B,57,26) RS1/16S100J  
R 860 (B,51,35) RS1/10S100J  
R 861 (B,61,59) RS1/16S224J  
R 862 (B,61,73) RS1/16S224J  
R 867 (B,15,24) RS1/8S680J

R 753 (B,51,110) RS1/16SS101J  
R 754 (B,51,104) RS1/16S222J  
R 755 (B,50,97) RS1/16S222J  
R 756 (B,38,118) RS1/16S101J  
R 759 (B,35,110) RS1/16S242J

R 868 (B,18,11) RS1/8S151J  
R 870 (B,21,25) RS1/16S103J  
R 871 (B,67,25) RS1/16S473J  
R 873 (B,66,25) RS1/16S0R0J  
R 881 (B,55,77) RS1/16S274J

D R 760 (B,35,107) RS1/16S242J  
R 761 (B,35,105) RS1/16S222J  
R 762 (B,35,109) RS1/16S242J  
R 763 (B,34,114) RS1/16SS0R0J  
R 764 (B,32,109) RS1/16SS0R0J

R 890 (A,168,106) RS1/16S0R0J  
R 891 (B,162,106) RS1/10S472J  
R 892 (B,159,107) RS1/16SS223J  
R 893 (B,154,105) RS1/16S330J  
R 894 (A,137,140) RS1/8S0R0J

R 765 (B,32,105) RS1/16SS0R0J  
R 766 (B,30,97) RS1/16SS0R0J  
R 767 (B,31,96) RS1/16S222J  
R 768 (B,31,108) RS1/16S182J  
R 769 (B,31,112) RS1/16S182J

R 895 (A,127,131) RS1/10S0R0J  
R 896 (A,124,131) RS1/10S0R0J  
R 897 (A,122,131) RS1/10S0R0J  
R 898 (A,120,131) RS1/10S0R0J  
R 900 (B,10,24) RS1/8S151J

R 770 (B,31,116) RS1/16S182J  
R 775 (A,37,109) RS1/16S0R0J  
R 780 (B,26,117) RS1/16S471J  
R 782 (B,25,110) RS1/16S471J  
R 783 (B,25,106) RS1/16S471J

R 901 (B,13,11) RS1/8S151J  
R 902 (B,15,11) RS1/8S151J  
R 903 (A,131,124) RS1/16S0R0J

**CAPACITORS**

R 784 (B,26,96) RS1/16S471J  
R 801 (A,84,61) RS1/16S103J  
R 802 (A,88,66) RS1/10S360J  
R 803 (A,88,68) RS1/10S360J  
R 804 (B,68,51) RS1/16S6803D

C 1 (B,128,27) CKSRYB104K16  
C 2 (B,127,31) CKSRYB104K16  
C 3 (B,127,33) CKSRYB104K16  
C 4 (B,127,38) CKSRYB104K16  
C 5 (B,127,50) CKSRYB104K16

R 807 (B,44,47) RS1/8S0R0J  
R 808 (B,59,38) RS1/16S0R0J  
R 809 (B,41,46) RS1/10S102J  
R 810 (B,62,38) RS1/16S101J  
R 811 (B,62,37) RS1/16S1600D

C 6 (A,148,45) CKSRYB104K16  
C 7 (A,152,53) CKSRYB104K16  
C 8 (A,152,58) CKSRYB104K16  
C 9 (A,152,61) CKSRYB104K16  
C 10 (A,152,64) CKSRYB104K16

R 812 (B,65,37) RS1/16S5601D  
R 813 (B,67,38) RS1/16S1001D  
R 814 (B,66,35) RS1/16S331J

C 11 (A,152,69) CKSRYB104K16  
C 12 (B,131,26) 10É F CCG1192

5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
C 13	(B,142,34)		CKSRYB104K16			C 97	(B,160,36)		CKSRYB224K10		
C 14	(B,142,37)		CKSRYB104K16			C 98	(B,160,38)		CKSRYB224K10		
C 15	(A,143,44)		CKSRYB104K16			C 101	(A,128,27)		CKSRYB104K16		A
C 16	(A,141,44)		CKSRYB104K16			C 102	(A,131,20)		CKSRYB104K16		
C 17	(A,143,75)		CKSRYB104K16			C 103	(A,135,34)		CKSRYB104K16		
C 18	(A,141,77)		CCSRCH100D50			C 104	(A,144,38)		CKSRYB104K16		
C 19	(A,138,77)		CCSRCH100D50			C 105	(A,152,38)		CKSRYB104K16		
C 20	(B,145,27)		CKSRYB104K16			C 106	(A,160,38)		CKSRYB104K16		
C 21	(B,144,31)		CKSRYB104K16			C 107	(A,156,42)		CKSRYB104K16		
C 22	(B,144,33)		CKSRYB104K16			C 108	(A,156,50)		CKSRYB104K16		
C 23	(B,144,38)		CKSRYB104K16			C 109	(A,156,59)		CKSRYB104K16		
C 24	(B,143,49)		CKSRYB104K16			C 110	(B,102,51) 10μF		CCG1171		
C 25	(A,136,45)		CKSRYB104K16			C 111	(B,102,48)		CKSRYB104K16		
C 26	(A,137,74)		CKSRYB104K16			C 112	(B,102,43)		CKSRYF224Z16		B
C 27	(B,148,26) 10μF		CCG1192			C 113	(B,102,36) 10μF		CCG1171		
C 28	(B,153,24)		CKSRYB104K16			C 114	(B,102,33)		CKSRYB104K16		
C 29	(B,158,36)		CKSRYB104K16			C 115	(B,102,28)		CKSRYF224Z16		
C 30	(A,154,27)		CKSRYF104Z25			C 116	(B,115,73)		CKSRYF104Z25		
C 31	(B,128,67)		CCSRCH9R0D50			C 117	(B,103,60) 10μF		CCG1171		
C 32	(B,128,71)		CCSRCH9R0D50			C 118	(B,103,59)		CKSRYB104K16		
C 33	(A,132,45)		CKSRYB104K16			C 119	(B,115,58)		CKSRYF104Z25		
C 35	(A,132,74)		CKSRYB104K16			C 120	(B,105,71)		CKSRYF104Z25		
C 36	(A,126,74)		CKSRYB104K16			C 121	(B,105,66)		CKSRYF104Z25		
C 38	(A,131,41) 10μF		CCG1171			C 122	(B,100,47)		CKSRYF104Z25		
C 39	(A,123,50)		CKSRYB104K16			C 123	(B,102,63)		CKSRYF103Z50		C
C 40	(A,122,51)		CKSRYB104K16			C 124	(B,126,49)		CCSRCH101J50		
C 41	(A,123,59)		CKSRYB104K16			C 125	(A,162,42)		CKSRYF104Z25		
C 42	(B,136,53)		CKSRYB104K16			C 126	(A,162,59)		CKSRYF104Z25		
C 43	(A,48,54)		CKSRYB104K16			C 201	(A,120,46)		CKSRYB104K16		
C 44	(B,133,65)		CKSRYB104K16			C 202	(A,115,51)		CKSRYB104K16		
C 46	(A,49,73)		CKSRYB104K16			C 203	(A,113,51)		CKSRYB104K16		
C 47	(B,141,74)		CKSRYB104K16			C 204	(A,118,46)		CKSRYB104K16		
C 49	(B,139,53)		CKSRYB104K16			C 205	(A,107,51)		CKSRYB104K16		
C 51	(A,144,44)		CKSRYB224K10			C 206	(A,102,50)		CKSRYB104K16		
C 54	(B,80,42)		CCSRCH121J50			C 207	(A,96,51)		CKSRYB104K16		
C 55	(B,144,53)		CKSRYB104K16			C 208	(A,92,51)		CKSRYB104K16		D
C 56	(A,39,51)		CKSRYB104K16			C 209	(A,83,46)		CKSRYB104K16		
C 57	(B,147,53)		CKSRYB104K16			C 211	(A,118,43)		CKSRYB104K16		
C 58	(A,48,51)		CKSRYB104K16			C 213	(A,118,41)		CKSRYB104K16		
C 60	(B,149,74)		CKSRYB104K16			C 214	(A,119,41)		CKSRYB104K16		
C 63	(B,154,55)		CKSRYB104K16			C 215	(A,83,44)		CKSRYB104K16		
C 64	(B,154,61)		CKSRYB104K16			C 216	(A,83,41)		CKSRYB104K16		
C 66	(B,154,63)		CKSRYB104K16			C 217	(A,83,39)		CKSRYB104K16		
C 67	(B,156,63) 10μF		CCG1192			C 220	(A,121,41) 10μF		CCG1171		
C 68	(A,126,44) 22μF		CCG1178			C 221	(A,118,38)		CKSRYB104K16		
C 69	(A,126,42) 22μF		CCG1178			C 222	(A,118,35)		CKSRYB104K16		
C 70	(A,126,38) 22μF		CCG1178			C 223	(A,120,17)		CKSRYB224K10		E
C 71	(B,125,69)		CKSRYF103Z50			C 224	(A,118,33)		CKSRYB104K16		
C 72	(B,159,60)		CKSRYF103Z50			C 225	(A,119,38)		CKSRYB104K16		
C 73	(B,157,60)		CKSRYF104Z25			C 227	(A,83,38)		CKSRYB104K16		
C 74	(B,154,70)		CKSRYF104Z25			C 228	(A,83,33)		CKSRYB104K16		
C 75	(A,152,26)		CKSRYF104Z25			C 230	(A,123,34)		CCSRCH150J50		
C 76	(B,127,36)		CKSRYF103Z50			C 231	(A,123,25)		CCSRCH120J50		
C 77	(B,135,26)		CKSRYF103Z50			C 232	(A,118,30)		CKSRYB104K16		
C 78	(B,142,30)		CKSRYF103Z50			C 233	(A,118,27)		CKSRYB104K16		
C 79	(B,158,38)		CKSRYB103K50			C 234	(A,83,29)		CKSRYB104K16		
C 80	(B,151,26)		CKSRYB103K50			C 235	(A,84,27)		CKSRYB104K16		
C 81	(B,143,48)		CKSRYB224K10			C 237	(A,118,24)		CKSRYB104K16		F
C 82	(B,158,31)		CKSRYB103K50			C 238	(A,119,22)		CKSRYB104K16		
C 96	(B,160,31)		CKSRYB224K10			C 239	(A,84,26)		CKSRYB104K16		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

C 240 (A,84,23) CKSRYB104K16  
 C 241 (A,84,21) CKSRYB104K16  
 C 242 (A,112,17) CKSRYB104K16

C 607 (A,114,93)  
 C 608 (A,97,8)  
 C 609 (A,111,7)

CCSRCH101J50  
 CKSRYB103K50  
 CKSRYF104Z25

A

C 243 (A,108,17) CKSRYB104K16  
 C 244 (A,105,17) CKSRYB104K16  
 C 245 (A,102,17) CKSRYB104K16  
 C 246 (A,98,17) CKSRYB104K16  
 C 247 (A,94,17) CKSRYB104K16

C 610 (A,131,94)  
 C 611 (A,130,91)  
 C 651 (A,148,120)  
 C 652 (A,149,118)  
 C 653 (A,149,116)

CCSRCH101J50  
 CCSRCH471J50  
 CKSQYB475K6R3  
 CKSSYB103K16  
 CKSRYB105K10

C 248 (A,89,17) CKSRYB104K16  
 C 249 (A,84,17) 10μF CCG1171  
 C 250 (A,104,52) 10μF CCG1171  
 C 251 (A,120,34) 10μF CCG1171  
 C 252 (A,85,51) 10μF CCG1171

C 654 (A,152,115)  
 C 655 (A,155,115)  
 C 656 (A,153,129)  
 C 657 (A,150,123)  
 C 658 (A,148,123)

CKSRYB105K10  
 CKSRYB105K10  
 CKSSYB102K50  
 CKSRYB105K10  
 CKSRYB105K10

B

C 253 (A,121,23) CKSRYF104Z25  
 C 255 (A,83,42) CKSRYB103K50  
 C 256 (A,83,36) CKSRYB103K50  
 C 257 (A,83,35) CKSRYB103K50  
 C 258 (A,83,31) CKSRYB103K50

C 659 (A,152,129)  
 C 665 (B,163,127)  
 C 666 (A,148,126)  
 C 667 (A,147,129)  
 C 701 (B,83,10)

CKSSYB102K50  
 CKSRYB104K16  
 CKSQYF104Z50  
 CKSQYF104Z50  
 CKSRYF104Z25

C 259 (A,83,30) CKSRYB103K50  
 C 260 (A,84,24) CKSRYB103K50  
 C 261 (A,80,17) CKSRYB103K50  
 C 262 (A,79,17) CKSRYB103K50  
 C 301 (A,137,30) CKSRYF104Z25

C 702 (B,82,9)  
 C 705 (A,70,12)  
 C 707 (A,89,103)  
 C 751 (A,47,104)  
 C 752 (B,48,110)

CKSRYF104Z25  
 CKSRYF104Z50  
 CKSRYF104Z25  
 CKSRYB104K16  
 CKSRYB104K16

C

C 302 (A,144,30) CKSRYB334K10  
 C 303 (A,138,21) CKSRYF104Z25  
 C 306 (A,116,57) CKSRYF104Z25  
 C 323 (A,103,65) 10μF CCG1171  
 C 328 (A,100,59) CKSRYB104K16

C 753 (B,48,108)  
 C 754 (B,48,106)  
 C 755 (B,48,99)  
 C 756 (B,48,104)  
 C 758 (A,45,97)

CKSRYB104K16  
 CKSRYB104K16  
 CCSRCH470J50  
 CCSRCH5R0C50  
 CEVQW470M16

C 329 (A,98,59) 10μF CCG1171  
 C 341 (A,156,27) CCSRCH101J50  
 C 342 (A,136,23) CKSRYF104Z25  
 C 344 (B,142,20) CKSRYF103Z50  
 C 345 (B,140,20) CKSRYF104Z25

C 759 (B,49,96)  
 C 760 (B,44,115)  
 C 761 (B,42,116)  
 C 762 (B,35,100)  
 C 766 (B,35,103)

CKSRYB105K6R3  
 CKSQYB225K10  
 CKSSYB103K16  
 CCSRCH220J50  
 CKSRYB105K6R3

D

C 346 (B,126,20) CKSRYF103Z50  
 C 347 (B,115,19) CKSRYF103Z50  
 C 348 (B,114,17) CKSRYF104Z25  
 C 349 (B,92,16) CKSRYF103Z50  
 C 356 (A,109,64) CKSRYB102K50

C 767 (A,38,104)  
 C 772 (A,45,110)  
 C 774 (B,32,118)  
 C 775 (B,31,106)  
 C 776 (B,31,110)

CEVQW470M16  
 CKSRYB104K16  
 CKSQYB475K6R3  
 CCSRCH220J50  
 CCSRCH220J50

C 357 (A,93,75) CKSRYB102K50  
 C 370 (A,89,79) CKSRYB102K50  
 C 552 (A,29,129) CKSRYB104K16  
 C 553 (A,41,137) CKSRYB105K10  
 C 554 (A,38,136) CKSRYB103K50

C 777 (B,31,115)  
 C 801 (A,135,88)  
 C 802 (A,134,88)  
 C 803 (B,108,89)  
 C 804 (B,107,87)

CCSRCH220J50  
 CKSRYF104Z25  
 CKSRYB103K50  
 CKSRYF104Z25  
 CKSRYB103K50

E

C 555 (A,35,134) CKSYB106K6R3  
 C 556 (B,9,76) CKSRYF104Z25  
 C 557 (B,8,71) CKSRYB102K50  
 C 559 (A,18,97) CKSRYF104Z25  
 C 560 (A,20,100) CKSRYF104Z25

C 805 (A,91,66)  
 C 806 (A,96,69)  
 C 807 (B,93,90)  
 C 808 (A,90,90)  
 C 809 (B,97,99) 10μF

CKSRYB103K50  
 CEVW101M16  
 CKSRYB103K50  
 CEVW220M6R3  
 CCG1171

C 561 (A,18,103) CKSRYF104Z25  
 C 562 (A,19,53) CKSRYB104K16  
 C 563 (A,20,51) CKSRYB104K25  
 C 564 (B,17,35) CKSRYB103K50  
 C 566 (B,15,35) CKSRYB823K16

C 810 (B,76,91)  
 C 811 (A,97,91)  
 C 812 (B,103,87)  
 C 813 (A,66,91)  
 C 814 (B,76,88)

CKSRYF104Z25  
 CEVW101M6R3  
 CKSRYF104Z25  
 CKSRYB103K50  
 CKSRYB103K50

F

C 567 (B,22,128) CCSRCH102J50  
 C 568 (B,26,128) CKSRYB104K16  
 C 602 (A,118,115) CKSSYF104Z16  
 C 603 (A,120,115) CKSSYF104Z16  
 C 604 (A,119,117) CKSSYB104K10

C 815 (A,61,90)  
 C 816 (A,63,90)  
 C 817 (B,103,95)  
 C 818 (B,65,38)  
 C 819 (B,66,33)

CKSRYF104Z25  
 CKSRYB103K50  
 CKSRYF104Z25  
 CKSRYB473K50  
 CCSRCH101J50

C 605 (A,127,95) CCSRCH101J50  
 C 606 (A,112,96) CCSRCH471J50

C 820 (B,69,34)  
 C 821 (B,65,40)

CKSRYB224K16  
 CKSRYB103K50



5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
C 822	(B,68,32)	15pF	CCG1215			<b>MISCELLANEOUS</b>			UPC2749T		A
C 823	(B,64,26)		CKSRYB105K10						UPB1027GS		
C 824	(B,61,57)		CKSRYB822K50						NJM2100V		
C 825	(B,59,59)		CKSRYB152K50						ADC12H034CIMSAS1		
C 826	(B,57,60)		CKSRYB563K16						PD3390A		
C 827	(B,57,63)		CKSRYB103K50			IC 401	(A,25,17)	IC			
C 828	(B,57,64)	15pF	CCG1215			IC 402	(B,20,28)	IC			
C 829	(B,62,76)		CKSRYB822K50			IC 441	(A,32,30)	IC			
C 830	(B,59,73)		CKSRYB152K50			IC 461	(B,29,10)	IC			
C 831	(B,57,73)		CKSRYB563K16			IC 501	(B,50,26)	IC			
C 832	(B,57,67)		CKSRYB105K10			IC 502	(B,48,9)	IC	PD6519A		
C 833	(B,57,70)		CKSRYB103K50			IC 503	(A,49,29)	IC	M5M5V216ATP-70HI		
C 834	(B,92,88)	10μF	CCG1171			IC 504	(A,31,14)	IC	MAX6364PUT29		
C 835	(A,86,79)		CKSRYB104K16			Q 441	(A,32,22)	Transistor	2SB1132		
C 836	(A,139,89)		CKSRYB104K16			D 401	(B,11,28)	Diode	1SV314		
C 837	(A,89,56)		CKSRYB104K16			D 501	(B,35,30)	Diode	RB751V40		B
C 844	(B,53,32)		CKSRYF104Z25			L 401	(B,11,29)	Inductor	CTF1549		
C 845	(B,53,26)		CKSYB475K10			L 402	(B,26,22)	Inductor	CTF1486		
C 846	(B,53,34)		CKSRYF474Z16			L 403	(B,27,26)	Inductor	CTF1486		
C 847	(B,65,80)	4.7μF	CCG1111			L 404	(A,21,23)	Inductor	LCSA3N3R1608		
C 848	(B,64,60)		CKSRYF474Z16			L 405	(B,13,24)	Inductor	LCYB22NJ1608		
C 849	(B,65,72)		CKSRYF474Z16			L 406	(B,15,20)	Inductor	LCYB22NJ1608		
C 853	(A,56,35)	220μF/10V	CCH1409			L 407	(A,19,32)	Inductor	CTF1410		
C 854	(B,61,25)	4.7μF	CCG1111			L 408	(B,26,32)	Inductor	CTF1556		
C 855	(B,61,60)		CKSRYF104Z25			L 409	(B,18,12)	Inductor	LCYC1R0K2125		
C 856	(A,60,64)	10μF	CCG1173			L 410	(B,26,17)	Inductor	CTF1547		
C 857	(B,65,52)		CKSYB475K10			L 412	(A,25,27)	Inductor	CTF1547		
C 858	(B,61,74)		CKSRYF104Z25			L 413	(A,25,26)	Inductor	CTF1547		C
C 859	(A,63,64)	10μF	CCG1173			L 414	(A,25,32)	Inductor	CTF1547		
C 860	(A,63,59)	4.7μF	CCG1111			L 415	(A,26,29)	Inductor	CTF1547		
C 867	(B,45,26)	4.7μF	CCG1111			L 416	(A,26,28)	Inductor	CTF1547		
C 868	(B,49,25)	4.7μF	CCG1111			L 417	(B,25,20)	Inductor	CTF1547		
C 869	(A,57,27)	10μF	CCG1173			L 418	(A,14,33)	Inductor	CTF1410		
C 870	(A,54,27)	10μF	CCG1173			L 441	(B,32,20)	Inductor	CTF1410		
C 871	(B,45,29)	4.7μF	CCG1111			L 442	(A,29,25)	Inductor	CTF1410		
C 872	(A,60,59)	4.7μF	CCG1111			L 461	(A,28,9)	Inductor	CTF1410		
C 873	(A,80,62)	330μF/6.3V	CCH1366			L 462	(A,31,8)	Inductor	CTF1410		
C 874	(B,68,76)	4.7μF	CCG1111			L 467	(B,33,17)	Inductor	CTF1547		
C 875	(A,56,63)	10μF	CCG1173			L 468	(B,32,17)	Inductor	CTF1547		D
C 876	(A,56,60)	10μF	CCG1173			L 469	(A,32,11)	Inductor	CTF1410		
C 877	(A,64,80)		CKSRYB104K25			L 501	(B,38,17)	Inductor	CTF1410		
C 878	(A,81,73)	330μF/6.3V	CCH1366			L 502	(B,36,32)	Inductor	CTF1410		
C 879	(B,68,58)	4.7μF	CCG1111			L 503	(B,59,6)	Inductor	CTF1410		
C 881	(A,11,62)		CEAT472M16(P35)			L 504	(A,38,33)	Inductor	CTF1410		
C 882	(A,11,44)		CEAT472M16(P35)			L 531	(A,53,18)	Inductor	CTF1410		
C 890	(A,166,100)		CEVW101M16			X 401	(A,14,27)	TCXO 16.368MHz	CWX2381		
C 891	(A,150,94)		CEVW101M16			X 501	(A,37,26)	Radiator 32.768kHz	CSS1319		
C 892	(B,159,94)		CKSRYF104Z25			X 502	(B,36,26)	Radiator 20.00MHz	CSS1549		
C 893	(A,158,94)		CEVW101M16			F 401	(A,23,23)	Filter	CTF1548		E
C 894	(B,24,11)		CKSRYF104Z25			<b>RESISTORS</b>					
C 895	(A,13,18)		CEAT221M25(P35)						RS1/16SS472J		
C 896	(B,21,27)		CKSRYF104Z25						RS1/16SS472J		
C 897	(A,13,29)	2200μF/16V	CCH1659(P35)						RS1/16SS122J		
C 898	(A,150,107)		CEVW101M16						RS1/16SS622J		
C 899	(A,158,107)		CEVW101M16			R 401	(B,11,26)		RS1/16SS100J		
						R 402	(B,12,30)				
						R 403	(B,14,32)				
						R 404	(B,14,30)				
						R 405	(A,23,26)				
						R 406	(B,27,29)		RS1/16S271J		
						R 407	(B,25,18)		RS1/16S2R2J		
						R 441	(A,30,27)		RN1/16SC10R0D		
						R 442	(B,32,24)		RN1/16SE1501D		F
						R 443	(B,31,24)		RN1/16SE2402D		
						R 444	(B,31,27)		RN1/16SE3302D		

**B**  
Unit Number: CWX3141  
Unit Name: GPS Unit

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

A	R 445	(B,31,33)	RN1/16SE4702D
	R 446	(B,30,33)	RN1/16SE4702D
	R 447	(A,33,25)	RS1/16S432J
	R 448	(B,32,30)	RN1/16SE1002D
	R 449	(B,33,32)	RN1/16SE2202D
	R 450	(B,31,32)	RN1/16SE3302D
	R 451	(A,29,32)	RS1/16S103J
	R 452	(B,33,27)	RS1/16SS102J
	R 454	(B,33,26)	RS1/16SS102J
	R 460	(B,22,13)	RS1/16S0R0J
	R 461	(A,37,5)	RS1/16SS102J
	R 462	(A,38,9)	RS1/16SS102J
B	R 463	(B,35,12)	RAB4CQ102J
	R 464	(A,35,12)	RAB4CQ333J
	R 465	(A,39,8)	RS1/16SS102J
	R 470	(B,35,7)	RAB4CQ471J
	R 471	(B,35,4)	RAB4CQ104J
	R 477	(B,31,17)	RS1/16SS222J
	R 478	(B,30,16)	RS1/16SS222J
	R 479	(B,28,16)	RS1/16SS222J
	R 480	(B,28,17)	RS1/16SS332J
	R 481	(B,30,17)	RS1/16SS332J
	R 482	(A,38,6)	RS1/16SS223J
C	R 483	(A,38,5)	RS1/16SS473J
	R 501	(B,39,27)	RS1/16SS0R0J
	R 502	(B,38,29)	RS1/16SS102J
	R 503	(B,38,26)	RS1/16SS154J
	R 508	(B,60,14)	RS1/16SS103J
	R 509	(B,34,15)	RS1/16SS473J
	R 510	(A,38,7)	RS1/16SS102J
	R 511	(A,34,19)	RS1/16SS103J
	R 512	(B,39,31)	RS1/16SS473J
	R 513	(B,60,16)	RS1/16SS103J
D	R 514	(B,39,29)	RS1/16SS473J
	R 515	(A,30,12)	RS1/16SS473J
	R 517	(B,39,23)	RS1/16SS103J
	R 519	(B,39,21)	RS1/16SS473J
	R 521	(B,37,29)	RS1/16SS473J
	R 533	(A,40,19)	RS1/16SS103J
	R 534	(A,41,19)	RS1/16SS103J
	R 535	(A,38,13)	RS1/16SS103J
	R 536	(A,39,19)	RS1/16SS0R0J

**CAPACITORS**

E	C 401	(A,25,13)	CCSRCH100D50
	C 402	(A,24,20)	CCSSCH101J50
	C 403	(A,27,16)	CKSSYB104K10
	C 404	(A,20,24)	CCSSCH101J50
	C 405	(B,14,28)	CCSRUJ220J50
	C 406	(B,14,29)	CCSRUJ220J50
	C 407	(B,13,32)	CKSSYB333K16
	C 408	(B,12,32)	CKSSYB182K50
	C 409	(A,21,29)	CSZS100M6R3
	C 410	(B,27,32)	CKSSYB103K16
F	C 411	(A,21,27)	CKSSYB102K50
	C 412	(A,21,28)	CKSSYB102K50
	C 413	(A,20,31)	CKSSYB104K10
	C 414	(A,23,32)	CKSSYB104K10
	C 415	(A,24,30)	CKSSYB104K10

C 416	(A,24,28)	CKSSYB104K10
C 417	(B,24,22)	CKSSYB104K10
C 418	(A,21,32)	CKSSYB102K50
C 419	(B,39,32)	CKSSYB104K10
C 420	(A,14,32)	CKSSYB104K10
C 421	(B,26,27)	CKSSYB102K50
C 422	(B,25,26)	CKSSYB103K16
C 423	(B,26,24)	CKSSYB104K10
C 424	(B,27,22)	CCSRCH102J50
C 425	(B,29,24)	CCSRCH271J50
C 426	(B,28,26)	CCSRCH102J50
C 427	(B,25,25)	CKSSYB104K10
C 428	(B,14,24)	CKSSYB103K16
C 429	(B,12,24)	CCSRCH301J50
C 430	(B,12,22)	CCSSCH120J50
C 431	(B,14,20)	CCSRCH301J50
C 432	(B,16,22)	CKSSYB103K16
C 433	(B,19,10)	CCSRCH101J50
C 434	(B,18,14)	CKSSYB102K50
C 435	(B,19,14)	CKSSYB103K16
C 436	(B,31,22)	CKSSYB104K10
C 441	(B,31,28)	CKSRYB104K16
C 442	(A,30,29)	CCSRCH101J50
C 443	(A,30,32)	CKSRYB104K16
C 444	(B,32,22)	CKSSYB103K16
C 445	(A,29,30)	CKSSYB104K10
C 461	(A,28,5) 22μF/6.3V	CCH1408
C 462	(A,31,10)	CKSRYB104K16
C 463	(A,27,9)	CKSRYB104K16
C 464	(B,31,5)	CKSSYB103K16
C 465	(B,31,4)	CKSSYB103K16
C 466	(B,32,4)	CKSSYB103K16
C 467	(B,33,4)	CKSSYB103K16
C 468	(A,30,11)	CKSSYB104K10
C 469	(B,27,4)	CSZS100M10
C 470	(B,26,16)	CKSSYB104K10
C 471	(B,37,6)	CCSSCH101J50
C 501	(B,39,19)	CKSSYB104K10
C 502	(B,36,22)	CCSRCH150J50
C 503	(B,38,22)	CCSRCH150J50
C 504	(B,40,17)	CKSSYB104K10
C 506	(B,60,19)	CKSSYB104K10
C 507	(B,60,21)	CKSSYB104K10
C 508	(B,60,26)	CKSSYB104K10
C 509	(B,60,30)	CKSSYB104K10
C 511	(B,40,34)	CKSSYB104K10
C 512	(B,38,31)	CKSSYB104K10
C 514	(A,31,17)	CSZS100M6R3
C 515	(B,39,24)	CKSSYB104K10
C 516	(B,59,11)	CKSSYB104K10
C 517	(A,51,21)	CKSSYB104K10
C 518	(A,39,32)	CKSSYB104K10

**Unit Number:CWM9918****Unit Name:System Unit****MISCELLANEOUS**

IC 1001 (B,13,55) IC

NJM2137V

5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
IC 1002	(A,25,70)	IC	NJM2137V			Q 4204	(B,10,90)	Transistor	DTC323TU		
IC 1003	(B,13,67)	IC	NJM2137V			Q 4205	(B,11,95)	Transistor	DTC323TU		
IC 1201	(B,23,62)	IC	NJM2235V			Q 4206	(B,14,84)	Transistor	DTC323TU		A
IC 1202	(A,16,50)	IC	NJM2235V			Q 4207	(B,15,88)	Transistor	DTC323TU		
IC 1204	(A,17,63)	IC	NJM2561F1			Q 4208	(B,10,84)	Transistor	DTC323TU		
IC 1501	(B,86,18)	IC	TC74VHCT08AFTS1			Q 4209	(A,88,98)	Transistor	DTC124EU		
IC 1502	(A,84,31)	IC	PE5478A			Q 4210	(A,83,97)	Transistor	UMD2N		
IC 1503	(A,63,42)	IC	TC7SH08FUS1			Q 4211	(A,81,89)	Transistor	UMD2N		
IC 1505	(A,93,57)	IC	TC7S04FU			Q 4212	(A,92,100)	Transistor	DTC124EU		
IC 1506	(B,102,49)	IC	S-80840CNMC-B8Z			Q 4500	(B,39,60)	Transistor	UMD2N		
IC 1507	(A,96,57)	IC	TC7SH00FUS1			Q 4501	(B,50,61)	Transistor	DTC323TU		
IC 1601	(B,56,22)	IC	HA12240FP			Q 4502	(B,44,61)	Transistor	DTC323TU		
IC 1801	(B,44,76)	IC	TPD1018F			Q 4503	(B,54,61)	Transistor	UMD2N		
IC 1840	(A,127,67)	IC	S-812C50AUA-C3E			D 1401	(A,22,109)	Diode	UMZ6R8N		B
IC 1900	(A,135,82)	IC	M5237ML			D 1402	(A,22,105)	Diode	UMZ6R8N		
IC 1902	(B,128,78)	IC	S-812C50AUA-C3E			D 1403	(A,26,109)	Diode	UMZ6R8N		
IC 4001	(A,40,46)	IC	PML009A			D 1404	(A,14,109)	Diode	UMZ6R8N		
IC 4100	(B,43,67)	IC	NJM2058V			D 1405	(A,29,109)	Diode	UMZ6R8N		
IC 4200	(A,80,116)	IC	PAL007B			D 1406	(A,16,104)	Diode	UMZ6R8N		
IC 4301	(A,147,45)	IC	NJM2391DL1-33			D 1407	(A,26,105)	Diode	UMZ6R8N		
IC 4401	(B,43,38)	IC	TA2050FS1			D 1408	(A,18,109)	Diode	UMZ6R8N		
IC 4500	(B,48,54)	IC	NJM2068V			D 1409	(A,20,103)	Diode	UMZ6R8N		
Q 1201	(B,23,46)	Transistor	2SC4081			D 1450	(B,102,108)	Diode	UDZS5R6(B)		
Q 1501	(A,61,21)	Transistor	IMD2A			D 1451	(B,102,102)	Diode	UDZS5R6(B)		
Q 1502	(B,94,32)	Transistor	2SC4081			D 1501	(B,95,52)	Diode	1SS355		C
Q 1503	(B,95,48)	Transistor	UMD2N			D 1651	(A,53,16)	Diode	UDZS5R6(B)		
Q 1601	(B,92,44)	Transistor	2SA1576			D 1652	(A,50,16)	Diode	UDZS5R6(B)		
Q 1602	(B,95,40)	Transistor	DTC124EU			D 1801	(A,47,86)	Diode	S1G-6904G2P		
Q 1802	(A,64,37)	Transistor	2SA1576			D 1802	(A,46,99)	Diode	1SS355		
Q 1810	(A,62,31)	Transistor	DTC114EU			D 1803	(A,45,95)	Diode	1SS355		
Q 1820	(A,60,38)	Transistor	DTC114EU			D 1804	(A,47,89)	Diode	PZT27(B)		
Q 1821	(A,63,27)	Transistor	2SA1576			D 1805	(A,61,100)	Diode	S1G-6904G2P		
Q 1841	(A,137,65)	Transistor	2SB1184F5			D 1806	(B,55,116)	Diode	PZT27(B)		
Q 1842	(B,89,82)	Transistor	2SD1767			D 1810	(A,59,32)	Diode	1SS355		
Q 1850	(B,131,69)	Transistor	UMD2N			D 1811	(A,59,30)	Diode	RB500V-40		D
Q 1851	(B,120,68)	Transistor	2SD1760F5			D 1812	(A,51,93)	Diode	UDZS18(B)		
Q 1860	(B,81,78)	Transistor	IMX1			D 1813	(A,49,92)	Diode	UDZS18(B)		
Q 1861	(B,93,15)	Transistor	2SC4081			D 1814	(A,59,29)	Diode	UDZS6R8(B)		
Q 1881	(B,129,97)	Transistor	DTC114EU			D 1815	(A,54,100)	Diode	S1G-6904G2P		
Q 1882	(B,129,91)	Transistor	2SA1587			D 1820	(A,45,99)	Diode	1SS400		
Q 1883	(B,135,94)	Transistor	IMX1			D 1821	(A,45,92)	Diode	DAN202U		
Q 1884	(B,142,83)	Transistor	2SD1760F5			D 1822	(A,28,98)	Diode	5KP22A		
Q 1885	(B,135,100)	Transistor	DTC114EU			D 1841	(B,95,80)	Diode	UDZS20(B)		
Q 1900	(A,121,87)	Transistor	2SB1185			D 1850	(B,127,71)	Diode	HZU6R2(B1)		
Q 1901	(A,118,83)	Transistor	UMX1N			D 1860	(B,71,87)	Diode	HZU7R5(B3)		
Q 1902	(A,134,87)	Transistor	2SB1185			D 1861	(B,79,84)	Diode	KS926S2		E
Q 1903	(A,142,71)	Transistor	2SB1260			D 1862	(B,88,78)	Diode	RB500V-40		
Q 1904	(A,139,76)	Transistor	DTC114EU			D 1863	(B,88,76)	Diode	UDZS18(B)		
Q 1920	(B,141,24)	Transistor	2SB1260			D 1864	(B,77,79)	Diode	RB500V-40		
Q 1922	(A,162,8)	Transistor	2SD2396			D 1865	(B,96,16)	Diode	HZU6R8(B2)		
Q 1923	(A,160,10)	Transistor	UMF23N			D 1866	(A,106,89)	Diode	S1G-6904G2P		
Q 1924	(B,133,25)	Transistor	DTC114EU			D 1867	(A,107,85)	Diode	RB500V-40		
Q 1940	(B,135,55)	Transistor	DTC144EU			D 1880	(B,137,92)	Diode	RB500V-40		
Q 1941	(B,139,58)	Transistor	2SA1577			D 1881	(B,139,92)	Diode	RB500V-40		
Q 1942	(B,145,55)	Transistor	2SD1760F5			D 1882	(B,136,102)	Diode	HZU9R1(B1)		
Q 1943	(B,148,47)	Transistor	UMD2N			D 1883	(B,141,91)	Diode	HZU13(B1)		
Q 1960	(A,59,42)	Transistor	2SA1576			D 1900	(A,124,82)	Diode	HZU8R2(B1)		F
Q 4201	(A,85,90)	Transistor	2SC4081			D 1901	(A,122,79)	Diode	1SS355		
Q 4202	(A,78,94)	Transistor	UMD2N			D 1921	(A,155,9)	Diode	HZU8R2(B2)		
Q 4203	(B,17,93)	Transistor	DTC323TU			D 1940	(B,146,47)	Diode	HZU11(B2)		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

D 1960 (A,40,91) Diode 1SS355  
 D 1961 (A,37,102) Diode 1SS355  
 D 4200 (A,89,94) Diode DAN202U

L 1801 (A,46,102) Inductor CTF1556  
 L 1802 (A,50,102) Inductor CTF1556  
 L 1810 (A,32,91) Inductor CTF1306

A

D 4201 (A,88,90) Diode DAN202U  
 D 4202 (A,79,91) Diode UDZS8R2(B)  
 D 4203 (A,76,91) Diode MA111  
 D 4204 (A,91,97) Diode DAN202U  
 D 4300 (A,148,54) Diode 1SR154-400

L 1811 (A,52,103) Inductor CTF1306  
 L 1822 (A,42,92) Inductor LCTC2R2K1608  
 L 1823 (A,45,102) Inductor CTF1556  
 L 1830 (A,81,85) Choke Coil 100μH CTH1315  
 L 1960 (A,36,94) Inductor CTF1556

D 4301 (A,148,51) Diode 1SR154-400  
 D 4302 (A,148,58) Diode 1SR154-400  
 D 4500 (B,57,57) Diode DAN202U  
 D 4501 (B,60,57) Diode DAN202U  
 D 4502 (B,56,53) Diode DAN202U

L 4000 (A,26,39) Inductor LCTAW2R2J2520  
 L 4300 (B,155,54) Inductor LCTAW1R0J2520  
 L 4301 (B,157,86) Inductor LCTAW4R7J2520  
 L 4302 (B,155,32) Inductor LCTAW1R0J2520  
 L 4303 (B,156,75) Inductor LCTAW1R0J2520

B

D 4600 (A,59,61) Diode 1SS355  
 D 4601 (A,57,54) Diode UDZS4R7(B)  
 ZNR4300 (B,157,91) Surge Protector CSA30-201N  
 L 1001 (A,16,53) Inductor CTF1399  
 L 1002 (A,31,69) Inductor CTF1399

X 1501 (A,86,46) Radiator 12.58MHz CSS1601  
 △FU1401 (A,28,90) Fuse 3.15A CEK1259  
 △FU1402 (A,11,97) Fuse 3A CEK1286  
 △FU1820 (B,47,84) Fuse 2A CEK1257  
 △FU1821 (B,41,81) Fuse 2A CEK1257

L 1003 (A,11,56) Inductor CTF1399  
 L 1201 (A,38,67) Inductor CTF1334  
 L 1202 (B,28,67) Inductor LCYC2R2K1608  
 L 1203 (A,22,45) Inductor LCYC2R2K1608  
 L 1204 (A,25,50) Inductor CTF1334

△FU1823 (A,101,89) Fuse 4A CEK1288  
 △FU1830 (A,78,80) Fuse 1A CEK1254  
 △FU1840 (A,122,67) Fuse 250mA CEK1276  
 △FU1880 (A,101,95) Fuse 0.5A CEK1278  
 △FU1900 (A,143,74) Fuse 1A CEK1280

C

L 1205 (A,24,64) Inductor LCYC2R2K1608  
 L 1207 (B,25,34) Inductor LCYC2R2K1608  
 L 1301 (B,106,48) Inductor CTF1389  
 L 1302 (B,107,55) Inductor CTF1389  
 L 1303 (B,119,49) Inductor CTF1389

△FU1920 (A,144,33) Fuse 1.75A CEK1283  
 EF1401 (A,29,105) EMI Filter CCG1067  
 EF1402 (A,14,79) EMI Filter CCG1067  
 EF1403 (A,22,91) EMI Filter CCG1067  
 EF1801 (A,41,100) EMI Filter CCG1172

L 1304 (B,119,55) Inductor CTF1389  
 L 1305 (B,111,47) Inductor LCTAW2R2J2520  
 L 1401 (A,16,101) Inductor CTF1334  
 L 1402 (A,15,101) Inductor CTF1334  
 L 1403 (A,13,102) Inductor CTF1334

EF1820 (B,42,88) EMI Filter CCG1172  
 EF1821 (B,38,89) EMI Filter CCG1172

**RESISTORS**

L 1404 (A,18,101) Inductor CTF1334  
 L 1405 (A,12,109) Inductor CTF1306  
 L 1406 (A,11,105) Inductor CTF1306  
 L 1407 (A,10,109) Inductor CTF1306  
 L 1408 (A,9,105) Inductor CTF1306

R 1001 (B,12,41) RS1/16SS750J  
 R 1002 (B,11,43) RS1/16SS103J  
 R 1003 (A,24,90) RS1/16SS750J  
 R 1004 (A,24,80) RS1/16SS103J  
 R 1005 (B,14,80) RS1/16SS750J

L 1409 (A,8,109) Inductor CTF1306  
 L 1410 (A,7,105) Inductor CTF1306  
 L 1450 (B,104,112) Inductor CTF1334  
 L 1451 (B,104,106) Inductor CTF1334  
 L 1501 (A,97,43) Inductor CTF1379

R 1006 (B,13,78) RS1/16SS103J  
 R 1007 (B,14,43) RS1/16SS103J  
 R 1008 (A,26,80) RS1/16SS103J  
 R 1009 (B,11,78) RS1/16SS103J  
 R 1010 (B,13,47) RS1/16S4701D

L 1502 (B,90,20) Inductor CTF1334  
 L 1503 (A,70,23) Inductor CTF1379  
 L 1504 (A,98,22) Inductor CTF1379  
 L 1505 (A,70,39) Inductor CTF1379  
 L 1506 (A,62,44) Inductor CTF1334

R 1011 (B,11,49) RS1/16S4701D  
 R 1012 (A,28,79) RS1/16S4701D  
 R 1013 (A,23,77) RS1/16S4701D  
 R 1014 (B,12,74) RS1/16S4701D  
 R 1015 (B,14,73) RS1/16S4701D

L 1507 (A,83,49) Inductor CTF1379  
 L 1508 (A,94,61) Inductor CTF1334  
 L 1509 (A,95,61) Inductor CTF1334  
 L 1510 (B,99,51) Inductor CTF1334  
 L 1605 (B,52,23) Inductor LCTAW2R2J2520

R 1016 (B,16,51) RS1/16SS101J  
 R 1017 (B,14,49) RS1/16S4701D  
 R 1018 (B,11,50) RS1/16S4701D  
 R 1019 (B,10,52) RS1/16SS102J  
 R 1020 (A,29,75) RS1/16SS101J

L 1651 (A,50,22) Inductor CTF1306  
 L 1652 (A,49,22) Inductor CTF1306  
 L 1701 (B,24,19) Inductor CTF1463  
 L 1702 (B,23,23) Inductor CTF1463  
 L 1703 (B,31,18) Ferrite Bead CTF1528

R 1021 (A,26,76) RS1/16S4701D  
 R 1022 (A,23,75) RS1/16S4701D  
 R 1023 (A,22,68) RS1/16SS102J  
 R 1024 (B,10,70) RS1/16SS101J  
 R 1025 (B,11,73) RS1/16S4701D

L 1704 (A,42,6) Ferrite Bead CTF1528  
 L 1705 (A,40,7) Ferrite Bead CTF1528

R 1026 (B,14,72) RS1/16S4701D  
 R 1027 (B,15,70) RS1/16SS102J

5			6			7			8		
<u>Circuit Symbol and No.</u>			<u>Part No.</u>			<u>Circuit Symbol and No.</u>			<u>Part No.</u>		
R 1028	(B,13,60)		RS1/16SS563J			R 1540	(B,97,28)		RS1/16SS473J		
R 1029	(B,17,56)		RS1/16SS473J			R 1541	(A,70,34)		RAB4C681J		
R 1030	(A,28,69)		RS1/16SS563J			R 1542	(B,97,30)		RS1/16SS473J		A
R 1031	(A,29,71)		RS1/16SS473J			R 1543	(B,97,29)		RS1/16SS473J		
R 1032	(B,12,62)		RS1/16SS563J			R 1544	(B,97,31)		RS1/16SS473J		
R 1033	(B,10,66)		RS1/16SS473J			R 1545	(B,94,29)		RS1/16S473J		
R 1201	(B,23,65)		RS1/16SS105J			R 1546	(A,66,42)		RS1/16SS473J		
R 1202	(A,14,46)		RS1/16SS105J			R 1547	(A,97,33)		RS1/16SS473J		
R 1203	(B,23,66)		RS1/16SS105J			R 1548	(A,98,36)		RAB4C681J		
R 1204	(A,14,47)		RS1/16SS105J			R 1549	(B,94,28)		RS1/16S473J		
R 1205	(B,23,69)		RS1/16SS105J			R 1550	(A,70,41)		RAB4C101J		
R 1207	(A,17,60)		RS1/16SS105J			R 1551	(A,98,40)		RAB4C681J		
R 1208	(B,17,50)		RS1/16SS0R0J			R 1552	(B,104,41)		RS1/16SS472J		
R 1213	(A,19,76)		RS1/16SS750J			R 1554	(B,103,42)		RS1/16SS473J		B
R 1217	(B,21,48)		RS1/16S0R0J			R 1555	(B,79,40)		RS1/16SS473J		
R 1218	(B,24,42)		RS1/16S183J			R 1557	(A,90,46)		RS1/16SS473J		
R 1219	(A,24,43)		RS1/16SS0R0J			R 1558	(A,76,47)		RAB4C681J		
R 1220	(B,22,44)		RS1/16SS102J			R 1559	(A,79,47)		RAB4C681J		
R 1301	(B,109,54)		RS1/16SS101J			R 1561	(A,92,46)		RS1/16SS681J		
R 1302	(B,113,48)		RS1/16SS101J			R 1562	(A,75,50)		RS1/16SS104J		
R 1303	(B,113,54)		RS1/16SS101J			R 1563	(A,93,46)		RS1/16SS0R0J		
R 1304	(B,122,55)		RS1/16SS101J			R 1564	(A,76,50)		RS1/16SS104J		
R 1305	(B,123,48)		RS1/16SS101J			R 1565	(A,74,50)		RS1/16SS104J		
R 1501	(B,91,17)		RS1/16SS104J			R 1566	(B,95,51)		RS1/16SS473J		
R 1502	(B,89,17)		RS1/16SS104J			R 1567	(B,97,50)		RS1/16SS101J		C
R 1503	(B,82,18)		RS1/16SS104J			R 1568	(A,96,16)		RS1/16SS681J		
R 1504	(B,82,20)		RS1/16SS104J			R 1569	(B,97,19)		RS1/16SS104J		
R 1505	(A,65,17)		RS1/16SS103J			R 1570	(A,99,21)		RS1/16SS473J		
R 1506	(A,65,18)		RS1/16SS103J			R 1601	(B,58,16)		RS1/10S620J		
R 1507	(B,78,9)		RS1/16SS473J			R 1602	(B,56,16)		RS1/10S101J		
R 1508	(A,79,14)		RS1/16SS473J			R 1603	(B,60,16)		RS1/10S101J		
R 1509	(A,80,14)		RS1/16SS473J			R 1604	(B,54,26)		RS1/16SS0R0J		
R 1510	(A,81,14)		RS1/16SS473J			R 1605	(B,55,26)		RS1/16SS0R0J		
R 1511	(B,81,13)		RS1/16SS473J			R 1606	(B,53,17)		RS1/16SS102J		
R 1512	(B,82,12)		RS1/16SS473J			R 1607	(B,96,43)		RS1/10S122J		
R 1513	(B,84,12)		RS1/16SS104J			R 1608	(B,90,44)		RS1/16S332J		D
R 1514	(B,86,11)		RS1/16SS104J			R 1609	(B,91,40)		RS1/16S682J		
R 1515	(A,65,16)		RS1/16SS102J			R 1701	(B,39,14)		RS1/16SS0R0J		
R 1516	(A,65,19)		RS1/16SS102J			R 1702	(B,39,7)		RS1/16SS0R0J		
R 1518	(B,78,13)		RS1/16SS473J			R 1704	(B,42,23)		RS1/16SS0R0J		
R 1519	(B,94,22)		RS1/16SS0R0J			R 1706	(B,34,19)		RS1/16SS0R0J		
R 1520	(B,94,21)		RS1/16SS0R0J			R 1709	(B,30,21)		RS1/16SS0R0J		
R 1521	(A,77,14)		RAB4C681J			R 1711	(B,29,20)		RS1/16SS0R0J		
R 1522	(A,84,14)		RAB4C681J			R 1713	(B,28,22)		RS1/16SS0R0J		
R 1523	(A,88,14)		RAB4C681J			R 1714	(B,26,21)		RS1/16SS0R0J		
R 1524	(A,92,14)		RAB4C681J			R 1720	(B,14,18)		RS1/16SS0R0J		
R 1525	(A,70,19)		RAB4C681J			R 1721	(B,9,19)		RS1/16SS0R0J		E
R 1526	(A,96,15)		RS1/16SS681J			R 1722	(B,12,18)		RS1/16SS0R0J		
R 1527	(B,101,15)		RS1/16SS104J			R 1801	(A,64,35)		RS1/16SS101J		
R 1529	(A,98,19)		RAB4C681J			R 1802	(B,39,75)		RS1/16SS102J		
R 1530	(B,101,14)		RS1/16SS104J			R 1803	(B,39,77)		RS1/16SS103J		
R 1531	(A,70,25)		RAB4C681J			R 1804	(A,48,102)		RS1/16S4701D		
R 1532	(A,98,25)		RAB4C681J			R 1805	(A,63,33)		RS1/16SS471J		
R 1533	(A,70,28)		RS1/16SS681J			R 1806	(A,64,40)		RS1/16SS103J		
R 1534	(B,99,25)		RS1/16SS473J			R 1807	(A,50,98)		RS1/10S103J		
R 1535	(A,70,30)		RAB4C681J			R 1810	(A,36,90)		RS1/8S471J		
R 1536	(B,97,27)		RS1/16SS473J			R 1811	(A,41,86)		RS1/8S471J		F
R 1537	(A,97,27)		RS1/16SS681J			R 1820	(A,62,39)		RS1/16SS473J		
R 1538	(A,97,28)		RS1/16SS473J			R 1821	(A,64,29)		RS1/16SS102J		
R 1539	(A,98,31)		RAB4C681J			R 1823	(A,66,27)		RS1/16SS472J		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

R 1824 (A,63,25) RS1/16S472J  
 R 1825 (A,44,96) RS1/16SS103J  
 R 1826 (A,34,92) RS1/16SS153J

R 1940 (B,140,55)  
 R 1941 (B,138,59)  
 R 1942 (B,139,61)

RS1/16SS1R0J  
 RS1/16SS103J  
 RS1/16SS223J

A

R 1827 (B,113,95) RS1/10S0R0J  
 R 1834 (A,86,80) RS1/10S0R0J  
 R 1840 (A,121,65) RS1/16SS0R0J  
 R 1843 (A,131,69) RS1/16SS0R0J  
 R 1844 (A,132,65) RS1/16SS471J

R 1943 (B,146,50)  
 R 1944 (B,150,59)  
 R 1945 (B,150,57)  
 R 1946 (B,150,55)  
 R 1949 (B,141,51)

RS1/16SS221J  
 RS1/16SS121J  
 RS1/16SS121J  
 RS1/16SS121J  
 RS1/16SS1R0J

R 1846 (B,92,81) RS1/16SS820J  
 R 1847 (B,92,83) RS1/16SS820J  
 R 1848 (B,110,66) RS1/16SS0R0J  
 R 1849 (B,89,86) RS1/16S0R0J  
 R 1850 (B,128,66) RS1/10S181J

R 1960 (A,57,41)  
 R 1961 (A,58,38)  
 R 1962 (A,59,40)  
 R 1963 (A,36,92)  
 R 4000 (A,37,34)

RS1/16SS101J  
 RS1/16SS471J  
 RS1/16SS103J  
 RS1/10S103J  
 RS1/16SS102J

B

R 1851 (B,131,65) RS1/10S181J  
 R 1852 (B,133,65) RS1/10S181J  
 R 1853 (B,129,68) RS1/16SS221J  
 R 1862 (B,69,85) RS1/16SS473J  
 R 1863 (B,71,86) RS1/16SS473J

R 4001 (A,46,32)  
 R 4003 (A,36,33)  
 R 4004 (A,36,34)  
 R 4005 (A,35,34)  
 R 4006 (A,47,33)

RS1/16SS102J  
 RS1/16SS181J  
 RS1/16SS223J  
 RS1/16SS102J  
 RS1/16SS181J

R 1864 (B,85,76) RS1/16SS103J  
 R 1865 (B,84,76) RS1/16SS474J  
 R 1866 (B,95,15) RS1/16SS223J  
 R 1867 (B,94,17) RS1/16SS223J  
 R 1880 (B,129,93) RS1/16SS103J

R 4007 (A,47,35)  
 R 4008 (A,49,34)  
 R 4009 (A,32,54)  
 R 4010 (A,48,55)  
 R 4016 (A,34,56)

RS1/16SS223J  
 RS1/16SS102J  
 RS1/16SS0R0J  
 RS1/16SS0R0J  
 RS1/16SS101J

C

R 1881 (B,131,96) RS1/16SS103J  
 R 1882 (B,129,94) RS1/16SS512J  
 R 1883 (B,133,90) RS1/16SS224J  
 R 1884 (B,135,91) RS1/16SS472J  
 R 1885 (B,132,98) RS1/10S221J

R 4017 (B,47,63)  
 R 4019 (A,47,58)  
 R 4020 (B,41,63)  
 R 4021 (A,41,56)  
 R 4100 (B,40,71)

RS1/16SS224J  
 RS1/16SS101J  
 RS1/16SS224J  
 RS1/16SS0R0J  
 RS1/16SS472J

R 1886 (B,132,103) RS1/8S221J  
 R 1887 (B,136,105) RS1/8S221J  
 R 1888 (B,133,92) RS1/16SS0R0J  
 R 1900 (A,114,78) RS1/10S0R0J  
 R 1901 (A,122,81) RS1/16S221J

R 4101 (B,46,70)  
 R 4102 (B,46,71)  
 R 4103 (B,40,70)  
 R 4108 (B,37,68)  
 R 4109 (B,36,68)

RS1/16SS472J  
 RS1/16SS472J  
 RS1/16SS472J  
 RS1/16SS472J  
 RS1/16SS472J

D

R 1902 (A,144,64) RS1/10S0R0J  
 R 1903 (A,122,82) RS1/16S471J  
 R 1904 (A,118,79) RS1/16S101J  
 R 1905 (A,118,77) RS1/16S471J  
 R 1906 (A,122,84) RS1/16S223J

R 4110 (B,37,66)  
 R 4111 (B,41,64)  
 R 4112 (B,49,68)  
 R 4113 (B,48,67)  
 R 4114 (B,49,65)

RS1/16SS472J  
 RS1/16SS471J  
 RS1/16SS472J  
 RS1/16SS472J  
 RS1/16SS472J

R 1907 (A,118,80) RS1/16S103J  
 R 1908 (A,132,83) RS1/16S2202D  
 R 1909 (A,132,80) RS1/16S2201D  
 R 1910 (A,130,80) RS1/16S4301D  
 R 1911 (A,139,81) RS1/16SS821J

R 4115 (B,50,65)  
 R 4202 (A,82,91)  
 R 4203 (A,85,88)  
 R 4204 (A,81,92)  
 R 4205 (A,43,83)

RS1/16SS471J  
 RS1/16SS223J  
 RS1/16SS103J  
 RS1/16SS473J  
 RS1/16SS101J

E

R 1912 (A,139,83) RS1/16SS221J  
 R 1913 (A,144,79) RS1/8S821J  
 R 1914 (A,144,75) RS1/16SS153J  
 R 1915 (A,141,79) RS1/8S821J  
 R 1917 (A,110,71) RS1/16SS0R0J

R 4206 (A,41,76)  
 R 4207 (A,46,76)  
 R 4208 (A,37,81)  
 R 4209 (A,37,77)  
 R 4210 (A,29,79)

RS1/16SS101J  
 RS1/16SS471J  
 RS1/16SS561J  
 RS1/16SS471J  
 RS1/16SS561J

R 1920 (B,136,30) RS1/10S0R0J  
 R 1921 (B,140,30) RS1/10S0R0J  
 R 1922 (B,137,27) RS1/16SS103J  
 R 1923 (A,157,7) RS1/16SS221J  
 R 1924 (A,164,11) RS1/10S121J

R 4211 (A,90,100)  
 R 4212 (A,86,99)  
 R 4213 (B,20,91)  
 R 4214 (B,13,87)  
 R 4215 (B,14,93)

RS1/16SS103J  
 RS1/16SS103J  
 RS1/16SS223J  
 RS1/16SS223J  
 RS1/16SS223J

F

R 1925 (A,168,11) RS1/10S121J  
 R 1926 (A,168,8) RS1/10S121J  
 R 1927 (B,142,19) RS1/10S0R0J  
 R 1930 (B,137,26) RS1/16SS471J  
 R 1931 (B,135,26) RS1/16SS471J

R 4216 (B,19,91)  
 R 4217 (B,12,87)  
 R 4218 (B,13,92)  
 R 4219 (B,16,83)  
 R 4220 (B,16,89)

RS1/16SS471J  
 RS1/16SS471J  
 RS1/16SS471J  
 RS1/16SS223J  
 RS1/16SS223J

R 1932 (A,160,12) RS1/16SS223J  
 R 1933 (A,162,12) RS1/16SS183J

R 4221 (B,12,81)  
 R 4222 (B,17,83)

RS1/16SS223J  
 RS1/16SS471J

5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 4223	(B,17,89)	RS1/16SS471J		C 1024	(B,10,63)	CKSRYB104K16	
R 4224	(B,11,81)	RS1/16SS471J		C 1201	(A,12,47)	CKSQYB225K10	A
R 4225	(A,85,99)	RS1/16SS221J		C 1202	(A,11,47)	CKSQYB225K10	
R 4226	(A,80,106)	RS1/16SS101J		C 1203	(B,21,66)	CKSQYB225K10	
R 4227	(A,81,98)	RS1/10S102J		C 1204	(B,19,66)	CKSQYB225K10	
R 4228	(A,102,102)	RS1/16SS103J		C 1205	(A,37,68)	CKSRYB104K16	
R 4229	(A,102,103)	RS1/16SS103J		C 1206	(A,32,64)	CEVW101M16	
R 4230	(A,78,90)	RS1/16SS391J		C 1207	(A,28,60)	CKSRYB103K50	
R 4231	(A,78,89)	RS1/16SS391J		C 1208	(B,25,67)	CKSRYB104K16	
R 4233	(A,70,100)	RS1/16SS102J		C 1209	(B,26,68)	CKSYF106Z10	
R 4302	(B,155,40)	RS1/16S681J		C 1210	(A,27,50)	CKSRYB104K16	
R 4303	(B,156,66)	RS1/16S681J		C 1211	(A,18,44)	CKSRYB104K16	
R 4304	(B,156,68)	RS1/16S681J		C 1213	(A,19,47)	CKSRYB104K16	
R 4305	(B,154,71)	RS1/16S681J		C 1214	(B,28,60)	CKSQYB225K10	B
R 4306	(B,156,60)	RS1/16S681J		C 1215	(A,26,56)	CEVW101M16	
R 4308	(B,156,63)	RS1/16S681J		C 1216	(A,19,45)	CKSYF106Z10	
R 4315	(B,154,26)	RS1/16S0R0J		C 1217	(A,27,51)	CKSRYB103K50	
R 4409	(B,44,44)	RS1/16SS102J		C 1218	(A,20,54)	CKSQYB225K10	
R 4412	(B,41,46)	RS1/16SS101J		C 1219	(A,22,63)	CKSYF106Z10	
R 4413	(B,39,46)	RS1/16SS101J		C 1222	(A,20,62)	CKSRYB104K16	
R 4414	(B,43,45)	RS1/16SS223J		C 1223	(A,17,70)	CEVW101M16	
R 4415	(B,38,45)	RS1/16SS223J		C 1224	(A,11,71)	CEVW220M6R3	
R 4416	(B,38,44)	RS1/16SS102J		C 1233	(B,24,44)	CKSRYB104K16	
R 4500	(B,52,47)	RS1/16SS104J		C 1301	(B,105,55)	CKSRYB103K50	C
R 4501	(B,52,49)	RS1/16SS102J		C 1302	(B,108,48)	CKSRYB103K50	
R 4502	(B,47,49)	RS1/16SS102J		C 1307	(B,109,48)	CKSRYB103K50	
R 4503	(B,43,51)	RS1/16SS473J		C 1405	(A,12,99)	CKSRYB471K50	
R 4504	(B,54,49)	RS1/16SS473J		C 1406	(A,11,99)	CKSRYB471K50	
R 4505	(B,43,54)	RS1/16SS0R0J		C 1407	(A,9,99)	CKSRYB471K50	
R 4506	(B,43,52)	RS1/16SS473J		C 1408	(A,8,99)	CKSRYB471K50	
R 4507	(B,52,51)	RS1/16SS473J		C 1409	(A,7,99)	CKSRYB471K50	
R 4508	(B,53,54)	RS1/16SS0R0J		C 1410	(A,5,99)	CKSRYB471K50	
R 4509	(B,43,57)	RS1/16SS331J		C 1411	(A,9,95)	CKSRYB103K50	
R 4510	(B,51,58)	RS1/16SS331J		C 1450	(B,105,110)	CKSRYB102K50	
R 4511	(B,51,59)	RS1/16SS104J		C 1451	(B,104,103)	CKSRYB102K50	
R 4512	(B,45,59)	RS1/16SS104J		C 1501	(A,96,51)	CEVLW100M16	D
R 4515	(B,59,52)	RS1/16SS0R0J		C 1502	(A,95,47)	CKSRYB103K50	
R 4600	(A,59,63)	RS1/16SS102J		C 1503	(B,89,20)	CKSSYB104K10	
<b>CAPACITORS</b>				C 1504	(A,94,44)	CKSRYB103K50	
C 1001	(B,16,43) 10μF	CCG1171		C 1505	(A,63,18)	CKSSYB104K10	
C 1002	(B,10,46) 10μF	CCG1171		C 1506	(B,78,22)	CKSSYB104K10	
C 1003	(A,28,83) 10μF	CCG1171		C 1507	(B,78,23)	CKSSYB104K10	
C 1004	(A,21,79) 10μF	CCG1171		C 1508	(B,79,26)	CKSRYB102K50	
C 1005	(B,9,78) 10μF	CCG1171		C 1509	(B,92,27)	CKSRYB104K16	
C 1006	(B,15,77) 10μF	CCG1171		C 1510	(A,70,38)	CKSRYB102K50	
C 1007	(B,13,43)	CKSRYB473K50		C 1511	(A,65,44)	CKSSYB104K10	E
C 1008	(A,26,78)	CKSRYB473K50		C 1512	(A,88,46)	CKSRYB105K10	
C 1009	(B,12,78)	CKSRYB473K50		C 1513	(A,83,46)	CKSRYB102K50	
C 1010	(B,14,50)	CCSRCK1R0C50		C 1515	(A,91,46)	CKSRYB103K50	
C 1012	(A,26,75)	CCSRCK1R0C50		C 1516	(A,93,59)	CKSRYF104Z25	
C 1014	(B,11,72)	CCSRCK1R0C50		C 1517	(B,98,48)	CKSQYB225K10	
C 1016	(B,15,55)	CKSRYB105K10		C 1519	(A,96,59)	CKSRYF104Z25	
C 1017	(A,28,71)	CKSRYB105K10		C 1520	(B,103,52)	CKSSYB104K10	
C 1018	(B,15,67)	CKSRYB105K10		C 1521	(B,97,47)	CKSSYB103K16	
C 1019	(A,16,57)	CEVW100M16		C 1603	(B,61,21)	CKSRYB102K50	
C 1020	(A,33,73)	CEVW100M16		C 1606	(B,61,22)	CKSRYB102K50	F
C 1021	(A,12,63)	CEVW100M16		C 1608	(B,61,23)	CKSRYB104K16	
C 1022	(B,15,59)	CKSRYB104K16		C 1651	(A,53,19)	CKSRYB103K50	
C 1023	(A,30,72)	CKSRYB104K16		C 1652	(A,50,19)	CKSRYB103K50	
				C 1653	(A,47,13)	CKSRYB104K25	

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

A	C 1709	(B,22,20)	CKSSYB104K10	C 1942	(B,142,47)	CKSRYB104K25
	C 1712	(B,24,26)	CKSSYB104K10	C 1944	(B,144,47)	CKSRYB473K50
	C 1801	(B,48,75)	CKSRYF104Z25	C 1960	(A,35,102)	CKSRYF103Z50
	C 1802	(B,48,78)	CKSRYB473K25	C 4000	(A,44,33)	CKSRYB152K50
	C 1803	(A,40,97)	CKSRYF104Z25	C 4001	(A,39,33)	CKSRYB152K50
	C 1804	(B,44,100)	CKSRYF104Z25	C 4002	(A,31,39)	CKSRYB102K50
	C 1806	(B,44,116)	CKSQYF103Z50	C 4003	(A,30,33)	CEVW470M16
	C 1807	(B,46,116)	CKSQYF104Z50	C 4004	(A,31,37)	CKSRYB104K16
	C 1810	(A,43,87)	CKSRYF104Z25	C 4005	(A,36,37)	CKSRYB105K10
	C 1811	(B,57,101)	CKSRYB471K50	C 4006	(A,37,37)	CKSRYB105K6R3
B	C 1812	(B,63,115)	CKSRYB471K50	C 4007	(A,39,37)	CKSRYB105K6R3
	C 1813	(B,55,100)	CKSRYB471K50	C 4008	(A,40,37)	CKSRYB104K16
	C 1814	(B,61,115)	CKSRYB471K50	C 4009	(A,43,37)	CKSRYB104K16
	C 1815	(B,54,100)	CKSRYB471K50	C 4010	(A,44,37)	CKSRYB105K6R3
	C 1816	(B,60,115)	CKSRYB471K50	C 4011	(A,34,37)	CKSRYB105K10
	C 1817	(B,53,100)	CKSRYB471K50	C 4012	(A,45,37)	CKSRYB105K6R3
	C 1818	(B,59,115)	CKSRYB471K50	C 4013	(A,46,37)	CKSRYB105K10
	C 1819	(B,43,100)	CKSRYB471K50	C 4014	(A,48,37)	CKSRYB105K10
	C 1824	(B,41,84)	CKSRYF104Z25	C 4015	(A,30,41)	CKSYB475K16
	C 1825	(A,60,35)	CKSRYB105K10	C 4016	(A,30,43)	CKSYB475K16
C	C 1826	(A,43,96)	CKSRYF104Z25	C 4017	(A,30,46)	CKSYB475K16
	C 1828	(B,39,85)	CKSRYF104Z25	C 4018	(A,30,48)	CKSYB475K16
	C 1830	(A,87,77)	CKSQYB104K25	C 4019	(A,50,41)	CKSYB475K16
	C 1831	(A,99,73)	CEVLW330M25	C 4020	(A,50,43)	CKSRYB475K16
	C 1832	(A,86,77)	CKSRYB104K25	C 4021	(A,50,46)	CKSYB475K16
	C 1833	(A,92,73)	CEVLW330M25	C 4022	(A,50,48)	CKSYB475K16
	C 1840	(A,140,55)	CEVW101M16	C 4023	(A,33,52)	CCSRCH100D50
	C 1841	(A,122,69)	CKSRYB103K50	C 4024	(A,34,54)	CCSRCH100D50
	C 1843	(A,104,63)	CEVW101M16	C 4025	(A,35,55)	CCSRCH100D50
	C 1845	(A,128,71)	CKSRYB103K50	C 4026	(A,40,60)	CEVW100M16
D	C 1847	(B,95,82)	CKSRYB104K25	C 4027	(A,42,55)	CKSRYB104K16
	C 1850	(B,129,71)	CKSRYB473K50	C 4034	(A,43,55)	CKSRYB104K16
	C 1851	(A,114,65)	CEVLW101M10	C 4035	(A,45,55)	CCSRCH100D50
	C 1852	(B,110,69)	CKSRYB103K50	C 4036	(A,46,55)	CCSRCH100D50
	C 1855	(B,132,95)	CKSRYB472K50	C 4037	(A,47,52)	CCSRCH100D50
	C 1880	(B,132,91)	CKSRYB104K16	C 4038	(A,38,57)	CKSRYB104K16
	C 1881	(B,144,92)	CKSRYB103K50	C 4100	(B,36,62) 10μF	CCG1138
	C 1882	(A,145,93)	CEVW100M16	C 4101	(B,56,64) 10μF	CCG1138
	C 1883	(B,143,94)	CKSRYB103K50	C 4102	(B,51,63)	CKSRYB105K6R3
	C 1884	(A,94,92)	CEVW101M16	C 4103	(B,36,66)	CKSRYB105K6R3
E	C 1900	(A,126,82)	CKSRYB104K25	C 4106	(B,38,69)	CCSRCH101J50
	C 1901	(A,128,76)	CEVW101M16	C 4107	(B,38,65)	CCSRCH101J50
	C 1902	(A,118,81)	CKSRYB102K50	C 4108	(B,48,69)	CCSRCH101J50
	C 1903	(A,150,87)	CEVW101M16	C 4109	(B,48,65)	CCSRCH101J50
	C 1904	(A,129,80)	CKSRYB103K50	C 4110	(B,43,71)	CKSRYB104K16
	C 1905	(A,130,83)	CKSRYB102K50	C 4111	(A,47,67)	CEVW100M16
	C 1906	(A,143,86)	CEVW101M16	C 4200	(A,48,79)	CEVW100M16
	C 1907	(A,138,71)	CKSRYB103K50	C 4201	(A,43,73)	CEVW100M16
	C 1908	(A,140,74)	CKSRYB104K25	C 4202	(A,49,73)	CEVW100M16
	C 1910	(A,116,73)	CEVLW101M10	C 4203	(A,39,73)	CEVW100M16
	C 1911	(B,125,77)	CKSRYB103K50	C 4204	(A,41,79)	CEVW100M16
	C 1912	(B,132,77)	CKSRYB104K25	C 4205	(A,33,79)	CEVW100M16
	C 1920	(A,148,25)	CEVW221M10	C 4206	(A,70,98)	CKSRYB105K10
	C 1921	(B,134,22)	CKSRYB473K50	C 4207	(A,70,96)	CKSRYB105K10
	C 1922	(A,135,16)	CEVW101M16	C 4208	(A,77,98)	CKSRYB105K10
F	C 1923	(A,170,9)	CKSRYB102K50	C 4209	(A,75,99)	CKSRYB105K10
	C 1924	(A,135,8)	CEVW100M16	C 4210	(A,67,97)	CKSRYB105K10
	C 1925	(A,157,10)	CKSRYB473K50	C 4211	(A,74,100)	CKSRYB105K10
	C 1926	(A,137,25)	CEVW221M10	C 4212	(A,76,96)	CKSRYB105K10
	C 1940	(B,141,56)	CKSRYB104K16	C 4213	(A,78,98)	CKSRYB105K10



5			6			7			8		
<u>Circuit Symbol and No.</u>			<u>Part No.</u>			<u>Circuit Symbol and No.</u>			<u>Part No.</u>		
C 4215	(A,91,105)	10μF	CCG1138			IC 5001	(A,28,51)	IC	TC90A64AF-P		
C 4216	(A,72,91)		CKSRYB104K25			IC 5026	(A,62,27)	IC	TC7SH00FUS1		
C 4217	(A,70,103)		CEHVW100M16			IC 5061	(A,24,70)	IC	TC7SH08FUS1		A
C 4218	(B,19,93)		CKSRYB222K50			IC 5151	(A,53,33)	IC	NJM2138V		
C 4219	(B,12,89)		CKSRYB222K50			IC 5181	(A,44,17)	IC	NJM082BV		
C 4220	(B,13,94)		CKSRYB222K50			IC 5331	(A,67,77)	IC	OZ961ISN		
C 4224	(B,17,87)		CKSRYB222K50			IC 5333	(A,59,65)	IC	TC7SH08FUS1		
C 4225	(B,12,83)		CKSRYB222K50			IC 5601	(A,91,53)	IC	PE5479A		
C 4229	(B,16,82)		CKSRYB222K50			IC 5602	(A,79,43)	IC	S-80835CNNB-B8U		
C 4230	(A,77,105)		CKSYB475K16			IC 5651	(A,73,55)	IC	S-29221BROI-J8T1		
C 4231	(A,79,105)		CKSYB475K16			IC 5700	(A,87,102)	IC	SBX3050-01		
C 4232	(A,58,79)	2200μF/16V	CCH1659(P35)			IC 5701	(A,88,90)	IC	TC7SH08FUS1		
C 4233	(A,85,104)		CEHVW330M16			IC 5702	(A,86,156)	IC	TPS850		
C 4234	(A,83,94)		CKSSYF104Z16			IC 5841	(A,140,25)	IC	R1130H251B		B
C 4235	(A,93,105)		CKSRYB473K50			IC 5851	(A,116,25)	IC	BD6171KV		
C 4236	(A,71,86)		CEVW470M16			IC 5901	(A,37,80)	IC	NJM2903V		
C 4302	(B,155,36)		CKSYB475K16			Q 5002	(A,43,64)	Transistor	2SC4617		
C 4303	(B,155,42)		CKSRYB103K50			Q 5101	(A,52,58)	Transistor	2SC4617		
C 4304	(B,152,36)		CKSRYB103K50			Q 5102	(A,49,66)	Transistor	2SA1774		
C 4306	(A,150,37)		CEVW470M6R3			Q 5103	(A,51,63)	Transistor	2SC4617		
C 4307	(A,142,37)		CEVW220M16			Q 5151	(A,44,38)	Transistor	UMZ1N		
C 4308	(B,154,73)		CKSRYB103K50			Q 5152	(A,39,35)	Transistor	UMZ1N		
C 4309	(A,149,65)		CEVW221M10			Q 5153	(A,39,31)	Transistor	UMZ1N		
C 4310	(A,149,76)		CEVW221M10			Q 5154	(A,54,26)	Transistor	UMZ1N		
C 4311	(A,151,81)		CKSRYB103K50			Q 5155	(A,47,26)	Transistor	UMZ1N		C
C 4316	(A,140,43)		CKSRYB103K50			Q 5156	(A,39,26)	Transistor	UMZ1N		
C 4317	(A,141,49)		CKSRYB104K16			Q 5182	(A,38,21)	Transistor	UMX2N		
C 4410	(B,47,43)		CKSRYB105K10			Q 5183	(A,38,15)	Transistor	UMT2N		
C 4411	(B,44,43)		CKSRYB105K10			Q 5331	(A,74,72)	Transistor	2SC4617		
C 4412	(B,40,45)		CKSRYB105K10			Q 5332	(A,76,72)	Transistor	DTA144EE		
C 4413	(B,40,43)		CKSRYB105K10			Q 5333	(A,80,75)	FET	TS8M1		
C 4415	(A,45,28)		CEVW100M16			Q 5334	(A,80,79)	FET	TS8M1		
C 4416	(A,38,28)		CEVW220M16			Q 5342	(A,63,73)	Transistor	2SC4617		
C 4500	(B,50,48)		CKSRYB105K6R3			Q 5343	(A,60,73)	Transistor	2SC4617		
C 4502	(B,50,50)		CKSRYB103K50			Q 5351	(A,54,82)	Transistor	2SC4097		
C 4503	(B,45,50)		CKSRYB103K50			Q 5371	(A,65,62)	Transistor	2SC4617		D
C 4504	(B,42,53)		CCSRCH471J50			Q 5372	(A,68,61)	Transistor	2SC4617		
C 4505	(B,50,52)		CCSRCH221J50			Q 5373	(A,68,65)	Transistor	2SA1774		
C 4506	(B,45,52)		CCSRCH221J50			Q 5375	(A,75,67)	Transistor	UMX2N		
C 4507	(B,54,52)		CCSRCH471J50			Q 5380	(A,71,64)	Transistor	2SC4617		
C 4508	(B,46,58)		CKSRYF104Z25			Q 5603	(A,86,40)	Transistor	2SC4617		
C 4509	(B,42,55)		CKSRYB105K6R3			Q 5681	(A,68,9)	Transistor	UMF5N		
C 4510	(B,53,57)		CKSRYB105K6R3			Q 5682	(A,68,13)	Transistor	UMF5N		
C 4511	(A,53,62)		CEVW220M16			Q 5683	(A,72,8)	Transistor	FMG12		
C 4601	(A,53,55)		CEVW101M16			Q 5701	(A,86,140)	Transistor	2SC4617		
<b>MONI_PANEL Unit</b>						Q 5702	(A,86,143)	Transistor	2SA1774		E
<b>Consists of</b>						Q 5703	(A,87,151)	Transistor	2SA1774		
<b>Monitor PCB</b>						Q 5831	(A,118,12)	FET	RSQ035P03		
<b>Keyboard PCB</b>						Q 5832	(A,108,13)	FET	RSQ035P03		
<b>Panel PCB</b>						D 5331	(A,73,75)	Diode	UDZS6R2(B)		
						D 5332	(A,74,78)	Diode	UDZS6R2(B)		
						D 5333	(A,83,71)	Diode	MA147		
						D 5334	(A,82,69)	Diode	MA147		
						D 5335	(A,79,69)	Diode	UDZS5R6(B)		
						D 5336	(A,57,78)	Diode	UDZS6R2(B)		
						D 5337	(A,62,83)	Diode	RB751V40		
						D 5338	(A,57,83)	Diode	UDZS5R6(B)		F
						D 5371	(A,63,67)	Diode	UDZS8R2(B)		
						D 5601	(A,108,40)	Diode	RB500V-40		
						D 5611	(A,120,53)	Diode	UDZS5R6(B)		
<b>MISCELLANEOUS</b>											

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

A	D 5612	(A,122,50) Diode	UMZ6R8N	L 5151	(A,59,17) Inductor	LCKAW100J2520
	D 5613	(A,118,49) Diode	UMZ6R8N	L 5152	(A,55,15) Inductor	LCKAW100J2520
	D 5614	(A,122,45) Diode	UMZ6R8N	L 5181	(A,55,12) Inductor	LCKAW101J2520
	D 5615	(A,118,44) Diode	UMZ6R8N	L 5182	(A,51,11) Inductor	LCKAW101J2520
	D 5681	(A,71,13) Diode	1SS355	L 5311	(A,51,76) Inductor	CTH1256
■	D 5683	(A,9,22) Diode	UDZS5R6(B)	L 5601	(A,106,44) Inductor	LCKBW100K2520
	D 5684	(A,9,28) Diode	UDZS5R6(B)	L 5606	(A,107,50) Inductor	CTF1306
	D 5700	(A,8,9) LED	SML-310PT(KL)	L 5607	(A,106,52) Inductor	CTF1306
	D 5701	(A,18,9) LED	SML-310PT(KL)	L 5801	(A,20,32) Inductor	LCKAW100J2520
	D 5702	(A,75,13) LED	SML-310PT(KL)	L 5802	(A,23,32) Inductor	LCKAW100J2520
B	D 5703	(A,41,8) LED	SML-310PT(KL)	L 5803	(A,27,32) Inductor	LCKAW100J2520
	D 5704	(A,32,8) LED	SML-310PT(KL)	L 5804	(A,30,32) Inductor	LCKAW100J2520
	D 5705	(A,50,8) LED	SML-310PT(KL)	L 5841	(A,139,15) Choke Coil 10μH	CTH1249
	D 5706	(A,75,3) LED	SML-310PT(KL)	L 5843	(A,129,32) Inductor	CTF1635
	D 5707	(A,86,4) LED	SML-310PT(KL)	L 5851	(A,123,12) Choke Coil 18μH	CTH1250
■	D 5708	(A,8,164) LED	SML-310PT(KL)	L 5852	(A,93,14) Choke Coil 10μH	CTH1259
	D 5709	(A,75,164) LED	SML-310PT(KL)	L 5862	(A,103,13) Choke Coil 68μH	CTH1318
	D 5710	(A,18,164) LED	SML-310PT(KL)	L 5863	(A,98,21) Inductor	DTL1096
	D 5711	(A,86,13) LED	SML-310PT(KL)	L 5864	(A,98,9) Inductor	CTF1635
	D 5712	(A,85,164) LED	SML-310PT(KL)	L 5865	(A,125,37) Inductor	CTF1635
C	D 5713	(A,32,165) LED	SML-310PT(KL)	L 5901	(A,45,73) Inductor	LCKAW100J2520
	D 5714	(A,64,10) LED	CL-190UB2-X	T 5331	(A,105,78) Transformer	CTT1119
	D 5715	(A,66,167) LED	CL-190UB2-X	TH5601	(A,77,7) Thermistor	CCX1051
	D 5716	(A,50,165) LED	SML-310PT(KL)	X 5001	(A,34,69) Crystal Resonator 42MHz	CSS1604
	D 5717	(A,66,4) LED	CL-190UB2-X	X 5601	(A,89,40) Radiator 12.58MHz	CSS1601
■	D 5718	(A,64,162) LED	CL-190UB2-X	S 5700	(A,69,6) Push Switch	CSG1155
	D 5835	(A,136,25) Diode	RB500V-40	S 5701	(A,62,6) Push Switch	CSG1126
	D 5851	(A,105,6) Diode	RB160M-30	S 5702	(A,53,8) Push Switch	CSG1155
	D 5861	(A,119,7) Diode	RSX201L-30	S 5703	(A,29,8) Push Switch	CSG1155
	D 5862	(A,105,17) Diode	RB548W	S 5704	(A,16,6) Push Switch	CSG1155
D	D 5863	(A,105,20) Diode	RB548W	S 5709	(A,77,166) Push Switch	CSG1155
	D 5864	(A,116,34) Diode	RB548W	S 5710	(A,86,166) Push Switch	CSG1155
	D 5865	(A,120,34) Diode	RB548W	S 5713	(A,80,8) Switch(SELECT)	CSX1075
	D 5866	(A,123,34) Diode	RB548W	S 5715	(A,29,165) Push Switch	CSG1155
	D 5901	(A,46,15) LED	SML-310PT(KL)	S 5716	(A,16,167) Push Switch	CSG1155
■	D 5902	(A,46,23) LED	SML-310PT(KL)	S 5717	(A,6,167) Push Switch	CSG1155
	D 5903	(A,15,4) LED	SML-310PT(KL)	S 5718	(A,6,6) Push Switch	CSG1155
	D 5904	(A,15,9) LED	SML-310PT(KL)	S 5719	(A,62,166) Push Switch	CSG1126
	D 5905	(A,13,85) LED	SML-310PT(KL)	S 5720	(A,55,166) Push Switch	CSG1155
	D 5906	(A,39,85) LED	SML-310PT(KL)	S 5901	(A,9,85) Push Switch	CSG1126
E	L 5001	(A,18,39) Inductor	CTF1306	S 5902	(A,44,85) Push Switch	CSG1126
	L 5002	(A,22,37) Inductor	CTF1306	VR5331	(A,69,83) Semi-fixed 15kΩ(B)	CCP1424
	L 5003	(A,26,37) Inductor	CTF1306	<b>RESISTORS</b>		
	L 5004	(A,28,38) Inductor	CTF1306			
	L 5005	(A,28,68) Inductor-Array	CTF1421	R 5001	(A,27,36)	RS1/16S101J
■	L 5006	(A,23,66) Inductor-Array	CTF1421	R 5002	(A,21,35)	RS1/16S470J
	L 5008	(A,26,67) Inductor	CTF1306	R 5003	(A,29,36)	RS1/16S101J
	L 5009	(A,23,37) Ferrite Bead	CTF1528	R 5004	(A,33,35)	RS1/16S101J
	L 5011	(A,20,36) Inductor	CTF1306	R 5005	(A,44,45)	RS1/16S473J
	L 5012	(A,25,37) Ferrite Bead	CTF1528	R 5006	(A,47,46)	RS1/16S392J
■	L 5013	(A,29,65) Ferrite Bead	CTF1528	R 5009	(A,44,62)	RS1/16S152J
	L 5014	(A,24,64) Ferrite Bead	CTF1528	R 5010	(A,42,67)	RS1/16S331J
	L 5015	(A,20,65) Inductor	CTF1306	R 5012	(A,32,64)	RS1/16S105J
	L 5016	(A,16,48) Ferrite Bead	CTF1528	R 5013	(A,34,65)	RS1/16S391J
	L 5071	(A,67,33) Inductor	LCKAW100J2520	R 5018	(A,22,68)	RS1/16S101J
F	L 5074	(A,43,42) Inductor	LCKBW1R0M2520	R 5022	(A,20,67)	RS1/16S101J
	L 5075	(A,52,42) Inductor	LCKBW100K2520	R 5024	(A,14,60)	RS1/16S333J
	L 5078	(A,50,46) Inductor	LCKAW100J2520	R 5025	(A,16,39)	RS1/16S101J
	L 5079	(A,46,49) Inductor	CTF1306	R 5026	(A,30,36)	RS1/16S0R0J
	L 5101	(A,130,5) Inductor	LCKAW100J2520			

**RESISTORS**

5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
R 5027	(A,17,31)	RS1/16S101J		R 5334	(A,71,69)	RS1/16S102J	A
R 5028	(A,64,24)	RS1/16S101J		R 5335	(A,59,70)	RS1/16S102J	
R 5029	(A,65,28)	RS1/16S102J		R 5336	(A,79,72)	RS1/16S513J	
R 5030	(A,18,35)	RS1/16S101J		R 5337	(A,61,79)	RS1/16S105J	
R 5037	(A,25,82)	RS1/16S472J		R 5338	(A,74,75)	RS1/16S103J	
R 5038	(A,27,82)	RS1/16S473J		R 5339	(A,66,83)	RS1/16S563J	
R 5039	(A,15,39)	RS1/16S101J		R 5340	(A,73,79)	RS1/16S103J	
R 5040	(A,24,82)	RS1/16S473J		R 5342	(A,78,69)	RS1/16S511J	
R 5061	(A,20,71)	RS1/16S473J		R 5343	(A,79,66)	RS1/16S821J	
R 5101	(A,52,55)	RS1/16S1502F		R 5344	(A,57,74)	RS1/16S473J	
R 5102	(A,49,56)	RS1/16S1003F		R 5350	(A,60,61)	RS1/16S471J	B
R 5103	(A,49,58)	RS1/16S681J		R 5351	(A,57,81)	RS1/16S332J	
R 5104	(A,51,60)	RS1/16S331J		R 5360	(A,57,75)	RS1/16S104J	
R 5105	(A,52,66)	RS1/16S0R0J		R 5361	(A,57,77)	RS1/16S103J	
R 5107	(A,52,51)	RS1/16S392J		R 5371	(A,63,64)	RS1/16S101J	
R 5108	(A,52,60)	RS1/16S331J		R 5372	(A,71,62)	RS1/16S103J	
R 5109	(A,49,64)	RS1/16S391J		R 5373	(A,73,65)	RS1/16S471J	
R 5110	(A,52,65)	RS1/16S391J		R 5374	(A,72,67)	RS1/16S101J	
R 5150	(A,39,28)	RS1/16S183J		R 5375	(A,64,64)	RS1/16S104J	
R 5152	(A,48,35)	RS1/16S3901F		R 5376	(A,67,67)	RS1/16S103J	
R 5153	(A,45,35)	RS1/16S1501F		R 5377	(A,68,63)	RS1/16S473J	C
R 5154	(A,54,30)	RS1/16S102J		R 5378	(A,71,66)	RS1/16S101J	
R 5155	(A,51,30)	RS1/16S102J		R 5379	(A,63,61)	RS1/16S824J	
R 5156	(A,45,31)	RS1/16S1501F		R 5602	(A,103,56)	RS1/16S471J	
R 5157	(A,48,30)	RS1/16S3901F		R 5603	(A,110,52)	RS1/16S473J	
R 5160	(A,58,33)	RS1/16S1002F		R 5604	(A,107,49)	RS1/16S471J	
R 5161	(A,60,30)	RS1/16S1802F		R 5605	(A,104,59)	RS1/16S471J	
R 5162	(A,57,30)	RS1/16S102J		R 5606	(A,103,53)	RAB4CQ471J	
R 5163	(A,53,38)	RS1/16S3901F		R 5607	(A,103,57)	RS1/16S471J	
R 5164	(A,50,38)	RS1/16S1501F		R 5608	(A,102,50)	RS1/16S471J	
R 5165	(A,47,38)	RS1/16S102J		R 5609	(A,102,47)	RS1/16S471J	D
R 5166	(A,41,38)	RS1/16S272J		R 5610	(A,89,64)	RS1/16S471J	
R 5167	(A,42,35)	RS1/16S102J		R 5611	(A,94,64)	RS1/16S470J	
R 5168	(A,37,35)	RS1/16S272J		R 5612	(A,92,64)	RS1/16S470J	
R 5169	(A,42,31)	RS1/16S102J		R 5613	(A,96,64)	RS1/16S272J	
R 5170	(A,37,31)	RS1/16S272J		R 5614	(A,91,64)	RS1/16S272J	
R 5171	(A,52,27)	RS1/16S331J		R 5619	(A,93,39)	RS1/16S473J	
R 5172	(A,56,24)	RS1/16S103J		R 5621	(A,93,40)	RS1/16S223J	
R 5174	(A,44,27)	RS1/16S331J		R 5622	(A,84,38)	RS1/16S473J	
R 5175	(A,48,24)	RS1/16S103J		R 5623	(A,97,64)	RS1/16S473J	
R 5177	(A,36,26)	RS1/16S331J		R 5624	(A,104,61)	RAB4CQ473J	
R 5178	(A,40,24)	RS1/16S103J		R 5625	(A,79,46)	RS1/16S473J	
R 5180	(A,35,29)	RS1/16S243J		R 5626	(A,75,50)	RS1/16S473J	
R 5181	(A,42,23)	RS1/16S3002F		R 5627	(A,101,43)	RAB4CQ473J	
R 5182	(A,47,22)	RS1/16S223J		R 5628	(A,81,44)	RS1/16S0R0J	
R 5183	(A,45,22)	RS1/16S1203F		R 5629	(A,101,45)	RS1/16S1502D	E
R 5184	(A,47,19)	RS1/16S1602F		R 5630	(A,97,42)	RAB4CQ471J	
R 5185	(A,48,14)	RS1/16S1502F		R 5631	(A,30,76)	RS1/16S104J	
R 5186	(A,42,21)	RS1/16S1002F		R 5632	(A,30,77)	RS1/16S104J	
R 5187	(A,42,18)	RS1/16S1002F		R 5633	(A,30,79)	RS1/16S104J	
R 5188	(A,41,16)	RS1/16S101J		R 5634	(A,30,81)	RS1/16S473J	
R 5189	(A,36,19)	RS1/16S153J		R 5637	(A,84,39)	RS1/16S471J	
R 5190	(A,40,21)	RS1/16S100J		R 5642	(A,79,51)	RS1/16S473J	
R 5191	(A,36,14)	RS1/16S153J		R 5646	(A,77,51)	RS1/16S473J	
R 5192	(A,41,14)	RS1/16S100J		R 5651	(A,79,56)	RAB4CQ471J	
R 5193	(A,38,13)	RS1/16S0R0J		R 5652	(A,79,53)	RS1/16S471J	F
R 5194	(A,39,18)	RS1/16S0R0J		R 5655	(A,80,59)	RS1/16S473J	
R 5331	(A,57,72)	RS1/16S105J		R 5657	(A,94,37)	RS1/16S0R0J	
R 5332	(A,71,73)	RS1/16S473J		R 5659	(A,79,58)	RS1/16S222J	
R 5333	(A,78,72)	RS1/16S183J		R 5681	(A,9,26)	RS1/16S104J	

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

A	R 5682	(A,9,21)	RS1/16S104J
	R 5683	(A,74,12)	RS1/16S102J
	R 5684	(A,75,12)	RS1/16S102J
	R 5685	(A,66,7)	RS1/16S103J
	R 5686	(A,66,10)	RS1/16S103J

R 5803	(A,35,21)	RS1/16S333J
R 5804	(A,51,24)	RS1/16S0R0J
R 5805	(A,45,24)	RS1/16S0R0J
R 5806	(A,35,26)	RS1/16S0R0J
R 5835	(A,142,21)	RS1/16S684J

■	R 5687	(A,66,12)	RS1/16S103J
	R 5688	(A,66,15)	RS1/16S103J
	R 5700	(A,85,91)	RS1/16S470J
	R 5701	(A,88,85)	RS1/16S470J
	R 5702	(A,11,12)	RS1/16SS101J

R 5840	(A,127,37)	RS1/16S0R0J
R 5861	(A,124,21)	RS1/16S333J
R 5862	(A,130,26)	RS1/16S1001D
R 5863	(A,125,25)	RS1/16S182J
R 5864	(A,128,26)	RS1/16S682J

B	R 5703	(A,48,11)	RS1/16SS101J
	R 5704	(A,49,4)	RS1/16SS101J
	R 5705	(A,74,163)	RS1/16SS101J
	R 5706	(A,89,158)	RS1/16SS121J
	R 5707	(A,38,164)	RS1/16SS101J

R 5865	(A,132,25)	RS1/16S201J
R 5866	(A,133,26)	RS1/16S6801F
R 5867	(A,123,28)	RS1/16S2001F
R 5868	(A,125,29)	RS1/16S5100F
R 5869	(A,128,22)	RS1/16S102J

■	R 5708	(A,51,13)	RS1/16SS821J
	R 5709	(A,70,12)	RS1/16S393J
	R 5710	(A,67,12)	RS1/16S203J
	R 5711	(A,62,12)	RS1/16S123J
	R 5712	(A,72,9)	RS1/16S124J

R 5870	(A,128,18)	RS1/16S1001D
R 5871	(A,130,22)	RS1/16S1600D
R 5872	(A,131,20)	RS1/16S2700D
R 5873	(A,108,22)	RS1/16S3303D
R 5874	(A,108,23)	RS1/16S1802F

C	R 5713	(A,72,6)	RS1/16S393J
	R 5714	(A,82,166)	RS1/16S203J
	R 5715	(A,81,167)	RS1/16S123J
	R 5716	(A,11,165)	RS1/16S124J
	R 5717	(A,20,165)	RS1/16S393J

R 5875	(A,105,23)	RS1/16S821J
R 5876	(A,109,25)	RS1/16S5102D
R 5877	(A,125,34)	RS1/16S2202F
R 5878	(A,124,32)	RS1/16S1802F
R 5879	(A,121,31)	RS1/16S1002F

■	R 5718	(A,36,167)	RS1/16S203J
	R 5719	(A,57,167)	RS1/16S123J
	R 5720	(A,72,13)	RS1/16S124J
	R 5721	(A,88,141)	RS1/16S472J
	R 5722	(A,88,144)	RS1/16S223J

R 5880	(A,115,16)	RS1/16S563J
R 5881	(A,77,37)	RS1/16S0R0J
R 5883	(A,81,37)	RS1/16S0R0J
R 5884	(A,117,17)	RS1/16S150J
R 5885	(A,121,18)	RS1/16S150J

■	R 5724	(A,11,7)	RS1/16S124J
	R 5725	(A,20,8)	RS1/16S393J
	R 5726	(A,38,6)	RS1/16S203J
	R 5727	(A,41,6)	RS1/16S123J
	R 5731	(A,89,154)	RS1/16SS121J

R 5886	(A,124,17)	RS1/16S273J
R 5890	(A,123,25)	RS1/16S684J
R 5901	(A,40,77)	RS1/16S103J
R 5902	(A,40,74)	RS1/16S103J
R 5903	(A,33,83)	RS1/16S392J

D	R 5732	(A,71,165)	RS1/16SS821J
	R 5733	(A,37,165)	RS1/16SS101J
	R 5734	(A,89,149)	RS1/16S104J
	R 5735	(A,87,153)	RS1/16S124J
	R 5736	(A,88,156)	RS1/16SS121J

R 5904	(A,34,83)	RS1/16S912J
R 5905	(A,33,80)	RS1/16S2703F
R 5906	(A,40,84)	RS1/16S153J
R 5907	(A,38,83)	RS1/16S153J
R 5951	(A,43,15)	RS1/16S471J

■	R 5737	(A,88,138)	RS1/16S473J
	R 5738	(A,89,152)	RS1/16S103J
	R 5739	(A,86,138)	RS1/16S473J
	R 5740	(A,35,164)	RS1/16SS101J
	R 5741	(A,75,162)	RS1/16SS101J

R 5952	(A,31,19)	RS1/16S471J
R 5953	(A,15,80)	RS1/10S911J
R 5954	(A,33,78)	RS1/10S911J
R 5955	(A,40,15)	RS1/16S471J
R 5956	(A,34,19)	RS1/16S471J

E	R 5742	(A,51,3)	RS1/16SS101J
	R 5743	(A,49,11)	RS1/16SS101J
	R 5744	(A,11,11)	RS1/16SS101J
	R 5745	(A,85,161)	RS1/16SS101J
	R 5746	(A,34,166)	RS1/16SS101J

R 5957	(A,19,80)	RS1/10S102J
R 5958	(A,30,77)	RS1/10S102J
R 5959	(A,37,15)	RS1/16S471J
R 5960	(A,37,19)	RS1/16S471J

■	R 5747	(A,78,163)	RS1/16SS820J
	R 5748	(A,53,3)	RS1/16SS820J
	R 5749	(A,50,11)	RS1/16SS820J
	R 5750	(A,11,10)	RS1/16SS820J
	R 5751	(A,83,162)	RS1/16SS101J

<b>CAPACITORS</b>		
C 5001	(A,20,38)	CKSRYB105K6R3
C 5002	(A,24,38)	CKSSYF104Z16
C 5003	(A,31,38)	CKSSYF104Z16
C 5004	(A,33,38)	CKSSYF104Z16
C 5005	(A,32,37)	CKSSYF104Z16

F	R 5752	(A,72,167)	RS1/16SS681J
	R 5753	(A,52,12)	RS1/16SS681J
	R 5802	(A,17,22)	RS1/16S0R0J
	R 5803	(A,35,21)	RS1/16S333J
	R 5802	(A,17,22)	RS1/16S0R0J

C 5006	(A,34,38)	CKSSYF104Z16
C 5007	(A,36,38)	CKSSYF104Z16
C 5008	(A,39,37)	CKSSYF104Z16
C 5009	(A,40,38)	CKSSYF104Z16

5			6			7			8		
<u>Circuit Symbol and No.</u>			<u>Part No.</u>			<u>Circuit Symbol and No.</u>			<u>Part No.</u>		
C 5010	(A,39,40)		CKSSYF104Z16			C 5155	(A,52,38)		CCSRCH4R0C50		
C 5011	(A,41,43)		CKSSYF104Z16			C 5156	(A,60,33)		CKSRYB104K50		A
C 5012	(A,40,44)		CKSSYF104Z16			C 5160	(A,44,35)		CKSRYB104K50		
C 5013	(A,42,46)		CKSRYB392K50			C 5161	(A,44,31)		CKSRYB104K50		
C 5015	(A,44,47)		CKSRYB105K6R3			C 5162	(A,49,38)		CKSRYB104K50		
C 5016	(A,40,48)		CKSSYF104Z16			C 5163	(A,57,28)		CKSRYB105K6R3		
C 5017	(A,41,49)		CKSSYF104Z16			C 5164	(A,50,28)		CKSRYB105K6R3		
C 5018	(A,44,50)		CKSRYB104K50			C 5165	(A,42,28)		CKSRYB105K6R3		
C 5019	(A,44,51)		CKSRYB104K50			C 5166	(A,36,28)		CKSRYB104K50		
C 5020	(A,44,54)		CKSRYB104K50			C 5167	(A,47,28)		CKSRYB104K50		
C 5021	(A,40,52)		CKSSYF104Z16			C 5168	(A,54,28)		CKSRYB104K50		
C 5022	(A,46,57)		CKSSYF104Z16			C 5169	(A,35,31)		CKSRYB103K50		
C 5023	(A,45,57)		CKSSYF104Z16			C 5170	(A,55,18)		CSZSR220M16		B
C 5024	(A,44,57)		CKSSYF104Z16			C 5171	(A,55,22)		CSZSR220M16		
C 5025	(A,41,53)		CKSSYF104Z16			C 5181	(A,51,20)		CSZSR220M16		
C 5026	(A,41,54)		CKSSYF104Z16			C 5182	(A,48,19)		CKSRYB104K50		
C 5027	(A,41,55)		CKSSYF104Z16			C 5183	(A,51,15)		CSZSR4R7M25		
C 5028	(A,41,56)		CKSSYF104Z16			C 5184	(A,48,16)		CKSRYB104K50		
C 5029	(A,41,57)		CKSSYF104Z16			C 5186	(A,48,22)		CKSRYB104K50		
C 5030	(A,44,60)		CKSRYB104K50			C 5188	(A,47,16)		CKSRYB104K50		
C 5031	(A,43,57)		CKSSYF104Z16			C 5311	(A,47,83) 10μF		DCH1165		
C 5032	(A,41,58)		CKSSYF104Z16			C 5332	(A,49,83) 10μF		DCH1165		
C 5033	(A,41,59)		CKSSYF104Z16			C 5334	(A,58,83)		CKSRYB104K50		
C 5034	(A,41,60)		CKSSYF104Z16			C 5335	(A,52,83)		CKSQYB105K16		
C 5035	(A,43,66)		CKSRYB103K50			C 5336	(A,60,70)		CKSRYB104K50		C
C 5036	(A,45,64)		CCSRCH4R0C50			C 5337	(A,61,75)		CKSQYB105K16		
C 5037	(A,39,62)		CKSSYF104Z16			C 5339	(A,65,70)		CKSQYB105K16		
C 5040	(A,39,63)		CKSSYF104Z16			C 5340	(A,69,72)		CKSRYB562K50		
C 5042	(A,37,64)		CCSRCH181J50			C 5341	(A,69,69)		CKSRYB152K50		
C 5045	(A,36,67)		CCSRCH9R0D50			C 5343	(A,62,82)		CKSRYB473K25		
C 5046	(A,33,66)		CCSRCH9R0D50			C 5344	(A,65,83)		CFHXSQ221J50		
C 5047	(A,30,63)		CKSSYF104Z16			C 5345	(A,71,81)		CKSRYB473K25		
C 5048	(A,29,64)		CKSSYF104Z16			C 5346	(A,61,77)		CKSRYB103K50		
C 5049	(A,24,63)		CKSSYF104Z16			C 5347	(A,77,83) 10μF		DCH1165		
C 5050	(A,20,64)		CKSRYB105K6R3			C 5348	(A,75,83) 10μF		DCH1165		
C 5051	(A,16,55)		CKSSYF104Z16			C 5349	(A,86,72)		CKSQYB105K16		D
C 5052	(A,16,47)		CKSSYF104Z16			C 5350	(A,88,72)		CKSQYB105K16		
C 5054	(A,24,34)		CCSRCH101J50			C 5351	(A,120,69) 15pF		CCG1194		
C 5055	(A,15,61)		CKSRYB104K50			C 5352	(A,81,72)		CKSRYB153K25		
C 5056	(A,18,68)		CCSRCH271J50			C 5353	(A,67,69)		CKSRYB104K50		
C 5057	(A,32,35)		CCSSCH220J50			C 5354	(A,84,75)		CKSRYB104K50		
C 5061	(A,21,71)		CKSRYB104K50			C 5355	(A,84,78)		CKSRYB104K50		
C 5063	(A,62,29)		CKSRYB104K50			C 5356	(A,63,70)		CKSRYB474K10		
C 5065	(A,61,25)		CCSRCH120J50			C 5357	(A,59,68)		CKSRYF104Z50		
C 5071	(A,56,42)		CSZS100M10			C 5371	(A,66,65)		CKSRYF104Z50		
C 5074	(A,45,41)		CKSRYB105K6R3			C 5372	(A,69,65)		CKSRYF104Z50		E
C 5075	(A,54,41)	68μF/6.3V	CKSRYB105K6R3			C 5601	(A,105,40)		CSZSR330M10		
C 5076	(A,48,42)		CCH1440			C 5602	(A,93,43)		CKSRYB104K50		
C 5081	(A,57,49)		CCSRCH101J50			C 5603	(A,77,44)		CKSRYB104K50		
C 5082	(A,57,50)		CCSRCH101J50			C 5604	(A,83,44)		CKSRYB105K6R3		
C 5083	(A,57,52)		CCSRCH101J50			C 5605	(A,88,43)		CKSRYB104K50		
C 5101	(A,51,49)		CKSYF106Z10			C 5614	(A,124,43)		CKSRYB222K50		
C 5102	(A,49,60)		CCSRCH470J50			C 5615	(A,114,45)		CKSRYB222K50		
C 5103	(A,49,62)		CCSRCH470J50			C 5616	(A,116,46)		CKSRYB222K50		
C 5104	(A,52,56)		CKSRYB104K50			C 5617	(A,114,49)		CKSRYB222K50		
C 5105	(A,50,53)		CSZS100M10			C 5618	(A,115,50)		CKSRYB222K50		
C 5151	(A,63,33)		CSZSR220M16			C 5619	(A,122,53)		CKSRYB223K50		F
C 5152	(A,48,32)		CKSRYB103K50			C 5621	(A,13,27)		CCSRCH102J50		
C 5153	(A,47,35)		CCSRCH4R0C50			C 5622	(A,13,26)		CCSRCH102J50		
C 5154	(A,47,30)		CCSRCH4R0C50			C 5623	(A,9,20)		CCSRCH102J50		

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

C 5624 (A,8,24) CCSRCH102J50

C 5625 (A,103,64) CKSRYB222K50

A C 5626 (A,11,54) CKSRYB222K50

C 5627 (A,100,61) CKSRYB222K50

C 5628 (A,102,61) CKSRYB222K50

C 5651 (A,73,60) CKSRYB104K50

C 5670 (A,77,8) CKSRYF104Z50

C 5685 (A,75,15) CCSRCH102J50

C 5686 (A,74,15) CCSRCH102J50

C 5687 (A,69,6) CKSRYB105K6R3

C 5700 (A,86,96) CKSRYB105K6R3

C 5701 (A,70,167) CKSRYB104K50

B C 5702 (A,64,11) CKSRYB104K50

C 5703 (A,87,87) CKSRYB104K50

C 5704 (A,87,148) CKSQYB475K6R3

C 5705 (A,85,158) CKSSYF104Z16

C 5801 (A,21,27) CSZSR4R7M25

C 5802 (A,20,23) CKSRYB104K50

C 5803 (A,25,27) CSZS100M10

C 5804 (A,23,23) CKSRYB104K50

C 5805 (A,28,27) CSZSR330M10

C 5806 (A,27,24) CKSRYB104K50

C 5807 (A,31,27) CSZSR33M35

C 5808 (A,30,24) CKSRYB473K25

C 5809 (A,21,32) CKSSYF104Z16

C 5810 (A,25,32) CKSSYF104Z16

C 5819 (A,123,17) CKSRYB104K50

C 5820 (A,125,21) CCSRCH101J50

C 5821 (A,125,19) CKSRYB103K50

C 5822 (A,131,32) CKSRYB104K50

C 5823 (A,122,30) CKSRYB393K16

C 5824 (A,116,31) CKSRYB102K50

C 5825 (A,125,31) CKSRYB105K6R3

C 5828 (A,115,17) CKSRYB104K50

C 5829 (A,118,17) CKSRYB102K50

D C 5830 (A,119,17) CKSRYB105K6R3

C 5831 (A,28,32) CKSSYF104Z16

C 5832 (A,32,32) CKSRYB473K25

C 5836 (A,139,19) CSZS100M16

C 5841 (A,139,21) CKSRYF105Z10

C 5842 (A,136,20) CKSRYB104K50

C 5843 (A,140,31) CSZS100M10

C 5844 (A,140,32) CKSRYB104K50

C 5845 (A,140,29) CKSRYB104K50

C 5852 (A,101,6) 33μF/10V CCH1586

E C 5854 (A,99,6) CKSRYB104K50

C 5860 (A,116,10) CKSRYB103K50

C 5861 (A,128,6) CKSRYB104K50

C 5862 (A,116,7) 10μF DCH1165

C 5863 (A,112,7) 10μF DCH1165

C 5864 (A,109,7) 10μF DCH1165

C 5865 (A,111,13) CKSRYB103K50

C 5866 (A,128,28) CKSRYB104K50

C 5867 (A,112,18) CKSRYB105K6R3

C 5868 (A,112,19) CKSRYB103K50

C 5869 (A,108,17) CKSRYB472K50

C 5870 (A,108,19) CKSRYB472K50

F C 5873 (A,112,30) CKSSYF104Z16

C 5875 (A,102,19) CKSRYB104K50

C 5876 (A,102,17) CKSQYF105Z25

**K****Unit Number:CWM9921****Unit Name:Connector Unit****MISCELLANEOUS**

D 2801 (A,25,25) Diode UDZS5R6(B)

D 2802 (B,24,26) Diode UDZS5R6(B)

D 2803 (A,25,20) Diode HZU12(B2)

D 2804 (A,25,23) Diode HZU12(B2)

D 2805 (A,38,28) Diode UMZ6R8N

D 2806 (A,25,32) Diode UMZ6R8N

D 2807 (A,48,14) Diode UMZ6R8N

D 2809 (A,48,10) Diode UMZ6R8N

D 2811 (A,53,10) Diode UMZ6R8N

D 2812 (A,53,14) Diode UMZ6R8N

D 2813 (B,44,23) Diode UDZS5R6(B)

D 2814 (B,44,29) Diode UDZS5R6(B)

L 2801 (A,36,8) Inductor CTF1334

L 2802 (A,34,8) Inductor CTF1334

L 2803 (A,33,8) Inductor CTF1334

L 2804 (A,31,8) Inductor CTF1334

⚠️FU2802 (A,21,7) Fuse 4A CEK1260

EF2801 (A,25,30) EMI Filter CCG1067

**RESISTORS**

R 2801 (A,31,26) RS1/16S102J

R 2802 (A,33,26) RS1/16S102J

R 2803 (A,31,22) RS1/16S0R0J

R 2804 (A,33,22) RS1/16S102J

R 2811 (A,38,24) RS1/10S0R0J

R 2812 (A,38,21) RS1/10S0R0J

R 2813 (A,43,10) RS1/16S102J

5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
R 2814 (A,22,19)			RS1/16S0R0J			<b>MISCELLANEOUS</b>					
<b>CAPACITORS</b>						IC 401 (A,16,29) IC			PE5430A		
C 2801 (A,19,19)			CKSRYB102K50			IC 402 (A,4,39) IC			S-80827CNNB-B8M		
C 2802 (A,20,19)			CKSRYB102K50			IC 404 (A,4,36) IC			TC7S08F		
C 2804 (A,17,19)			CKSRYB102K50			IC 601 (B,11,18) IC			BA033FP		
C 2809 (A,55,6)			CCSRCH101J50			IC 602 (B,10,71) IC			BA18BC0FP		
C 2810 (A,50,6)			CKSQYF104Z50			IC 1101 (A,15,82) IC			AN8703FH		
						IC 1201 (A,46,39) IC			BA5985FM		
						IC 1202 (A,45,56) IC			BA6859AFP-Y		
						IC 1301 (A,16,56) IC			MNZS26EDCUB		
						Q 1101 (B,36,104) Transistor			2SB1260		
						Q 1102 (B,36,98) Transistor			2SB1260		
						Q 1103 (B,25,105) Transistor			UN2211		
						Q 1104 (A,24,105) Transistor			2SB709A		
						Q 1105 (A,27,105) Transistor			2SD601A		
						D 1101 (B,33,104) Diode			1SS355		
						D 1102 (B,33,96) Diode			1SS355		
						D 1301 (B,25,55) Diode			UDZ2R7(B)		
						D 1302 (B,9,81) Chip LED			CL2051RXTU		
						L 401 (A,9,17) Inductor			CTF1395		
						L 402 (A,4,33) Inductor			CTF1410		
						L 1301 (B,15,55) Inductor			CTF1409		
						L 1302 (B,8,40) Inductor			CTF1409		
						L 1303 (B,15,58) Inductor			CTF1395		
						L 1305 (B,6,70) Inductor			CTF1409		
						X 401 (A,4,29) Ceramic Resonator 16.000MHz			CSS1576		
						X 1301 (A,33,64) Ceramic Resonator 16.934MHz			CSS1603		
						<b>RESISTORS</b>					
						R 401 (A,28,23)			RS1/16SS104J		
						R 403 (A,41,26)			RS1/16SS473J		
						R 404 (B,6,36)			RS1/16SS473J		
						R 405 (B,6,38)			RS1/16SS105J		
						R 406 (B,11,31)			RS1/16SS103J		
						R 407 (A,2,20)			RS1/16SS104J		
						R 410 (A,26,39)			RS1/16SS473J		
						R 414 (A,27,27)			RS1/16SS473J		
						R 415 (A,19,15)			RS1/16S1002D		
						R 418 (A,32,23)			RS1/16SS473J		
						R 419 (A,28,24)			RS1/16SS221J		
						R 420 (A,29,27)			RS1/16SS103J		
						R 421 (A,29,28)			RS1/16SS103J		
						R 423 (A,29,30)			RS1/16SS103J		
						R 424 (A,26,32)			RS1/16SS221J		
						R 427 (A,29,25)			RS1/16SS103J		
						R 433 (B,7,63)			RS1/16SS473J		
						R 434 (A,27,22)			RS1/16SS223J		
						R 435 (A,26,23)			RS1/16SS222J		
						R 436 (A,33,30)			RS1/16SS101J		
						R 437 (A,33,31)			RS1/16SS101J		
						R 601 (B,7,64)			RS1/16SS102J		
						R 603 (A,4,19)			RS1/16SS820J		
						R 604 (A,8,10)			RS1/16SS820J		
						R 605 (A,9,10)			RS1/16SS820J		
						R 606 (A,10,10)			RS1/16SS220J		
						R 607 (A,11,10)			RS1/16SS103J		
						R 608 (A,19,11)			RS1/16SS101J		
						R 612 (B,9,10)			RAB4CQ820J		

**L**  
Unit Number:CZW3097  
Unit Name:Main PCB Unit

### MISCELLANEOUS

IC 1	IC	BA6288FS
IC 2	IC	S-812C50AMC-C3E
IC 3	IC	TC7W14FU
IC 4	Photo-interrupter	GP2L24B
IC 5	Photo-interrupter	GP2L24B
Q 1	Transistor	2SB1185
Q 2	Transistor	IMX1
D 1	Diode	HZU6R2(B2)
L 2	Inductor	LCTAW2R2J2520
FU1	Fuse 2A	CEK1304

### RESISTORS

R 1	RS1/16S223J
R 2	RS1/8S271J
R 3	RS1/16S332J
R 4	RS1/16S471J
R 5	RS1/16S222J
R 11	RS1/10S0R0J
R 12	RS1/16S222J
R 13	RS1/16S222J
R 14	RS1/16S821J
R 15	RS1/16S821J
R 19	RS1/16S102J
R 20	RS1/16S102J
R 21	RS1/16S102J
R 22	RS1/16S102J

### CAPACITORS

C 1	CKSRYB153K50
C 2	CZC5169
C 3	CKSRYB105K10
C 7	CEVW100M16
C 8	CKSRYB104K50
C 9	CKSRYB473K50
C 10	CKSRYB473K50
C 11	CEVW100M16
C 12	CEVW100M16
C 13	CKSRYB104K50
C 14	CKSRYB104K50

**C**  
Unit Number:CWX3178  
Unit Name:DVD Core Unit (MS3R)

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

A	R 615	(B,11,10)	RAB4CQ220J	R 1242	(B,17,8)	RS1/16SS243J
	R 616	(B,19,11)	RAB4CQ220J	R 1243	(B,12,84)	RS1/16S391J
	R 617	(B,21,14)	RAB4CQ220J	R 1244	(B,9,84)	RS1/16S471J
	R 618	(B,24,11)	RAB4CQ220J	R 1245	(B,19,97)	RS1/16SS105J
	R 620	(A,14,11)	RS1/16SS103J	R 1301	(B,18,55)	RS1/16SS222J
B	R 625	(A,5,19)	RS1/16SS220J	R 1323	(B,21,47)	RS1/16SS221J
	R 626	(A,4,22)	RS1/16SS820J	R 1324	(B,22,47)	RS1/16SS221J
	R 627	(A,7,19)	RS1/16SS220J	R 1334	(A,34,45)	RS1/16SS221J
	R 629	(B,7,13)	RS1/16SS103J	R 1338	(B,26,57)	RS1/16SS472J
	R 1101	(A,24,97)	RS1/16SS101J	R 1339	(A,32,56)	RS1/16SS273J
C	R 1102	(B,40,101)	RS1/16SS3R9J	R 1340	(B,26,58)	RS1/16SS472J
	R 1103	(B,42,101)	RS1/16SS3R9J	R 1341	(A,32,57)	RS1/16SS273J
	R 1104	(B,42,102)	RS1/16SS3R9J	R 1342	(A,34,57)	RS1/16SS273J
	R 1105	(B,40,102)	RS1/16SS3R9J	R 1344	(A,32,58)	RS1/16SS273J
	R 1106	(A,21,97)	RS1/16SS330J	R 1349	(B,27,64)	RS1/16SS562J
D	R 1107	(B,40,97)	RS1/16SS3R9J	R 1350	(B,27,63)	RS1/16SS242J
	R 1108	(B,40,98)	RS1/16SS3R9J	R 1352	(B,24,64)	RS1/16S2702D
	R 1109	(B,40,99)	RS1/16SS3R9J	R 1353	(A,28,72)	RS1/16SS102J
	R 1110	(B,40,100)	RS1/16SS3R9J	R 1360	(B,21,65)	RS1/16SS153J
	R 1111	(B,17,104)	RS1/16SS272J	R 1361	(B,18,65)	RS1/16SS105J
E	R 1112	(B,18,104)	RS1/16SS472J	R 1362	(A,7,75)	RS1/16SS473J
	R 1113	(B,23,103)	RS1/16SS102J	R 1363	(A,3,75)	RS1/16SS101J
	R 1124	(A,5,85)	RS1/16SS273J	R 1364	(A,7,74)	RS1/16SS123J
	R 1125	(A,5,84)	RS1/16SS273J	R 1365	(A,4,74)	RS1/16SS101J
	R 1126	(A,6,81)	RS1/16SS224J	R 1367	(B,13,79)	RS1/16SS473J
F	R 1133	(A,6,79)	RS1/16S2402D	R 1369	(B,15,76)	RS1/16SS473J
	R 1134	(A,6,77)	RS1/16S1002D	R 1377	(A,2,68)	RS1/16SS103J
	R 1135	(A,2,77)	RS1/16S2702D	R 1378	(A,1,68)	RS1/16SS103J
	R 1140	(A,23,83)	RS1/16SS105J	R 1379	(A,1,44)	RS1/16SS0R0J
	R 1141	(A,25,85)	RS1/16SS105J	R 1380	(A,31,65)	RS1/16SS681J
G	R 1142	(B,17,80)	RS1/16SS105J	R 1381	(A,31,63)	RS1/16SS105J
	R 1151	(B,17,93)	RS1/16SS103J	R 1383	(B,24,52)	RS1/16SS0R0J
	R 1152	(B,13,90)	RS1/16SS103J	R 1384	(A,3,68)	RS1/16SS103J
	R 1201	(A,41,49)	RS1/16SS221J	R 1385	(A,-2,63)	RS1/16SS103J
	R 1202	(A,38,45)	RS1/16SS393J	R 1386	(A,-1,63)	RS1/16SS103J
H	R 1203	(A,39,45)	RS1/16SS303J	<b>CAPACITORS</b>		
	R 1205	(B,44,43)	RS1/16SS0R0J	C 401	(A,20,39)	CKSRYB474K10
	R 1206	(B,46,44)	RS1/16SS102J	C 402	(B,6,39)	CKSSYB104K10
	R 1209	(B,46,38)	RS1/16SS221J	C 403	(B,6,41)	CKSSYB103K16
	R 1210	(B,50,42)	RS1/16SS393J	C 404	(A,4,32)	CKSRYB105K10
I	R 1211	(B,51,44)	RS1/16SS393J	C 405	(A,11,17)	CKSRYB474K10
	R 1212	(B,50,45)	RS1/16SS393J	C 406	(A,19,19)	CKSRYB474K10
	R 1213	(A,53,47)	RS1/16SS393J	C 407	(A,16,14)	CKSSYB103K16
	R 1214	(B,44,47)	RS1/16SS221J	C 408	(A,19,16)	CKSRYB474K10
	R 1219	(A,51,50)	RS1/16SS221J	C 410	(B,6,37)	CKSSYB103K16
J	R 1220	(B,46,39)	RS1/16SS221J	C 411	(B,6,35)	CKSSYB104K10
	R 1221	(A,51,60)	RS1/16S1802D	C 601	(B,8,27) 10μF/10V	CCH1349
	R 1222	(A,27,79)	RS1/16SS221J	C 602	(B,12,27) 10μF/10V	CCH1349
	R 1223	(A,47,64)	RS1/16SS2R2J	C 603	(B,14,27)	CKSSYB102K50
	R 1224	(A,48,64)	RS1/16SS2R2J	C 604	(B,6,27)	CKSRYB474K10
K	R 1228	(A,49,64)	RS1/16SS2R2J	C 605	(B,11,63)	CSZSR470M6R3
	R 1231	(B,15,7)	RS1/16SS822J	C 606	(B,7,65)	CKSSYB102K50
	R 1232	(B,14,7)	RS1/16SS822J	C 607	(B,5,78)	CKSRYB474K10
	R 1233	(B,13,8)	RS1/16SS822J	C 611	(A,15,13)	CCSSCH181J25
	R 1234	(B,15,10)	RS1/16SS563J	C 1101	(B,14,101)	CSZSC470M16
L	R 1235	(B,14,10)	RS1/16SS243J	C 1102	(A,25,100)	CSZSR470M6R3
	R 1236	(B,13,10)	RS1/16SS683J	C 1103	(B,30,105)	CKSSYB104K10
	R 1238	(A,50,64)	RS1/16SS2R2J	C 1104	(B,33,102)	CKSSYB103K16
	R 1239	(A,51,64)	RS1/16SS2R2J			
	R 1241	(A,15,11)	RS1/16SS822J			



5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
C 1105	(A,22,100)		CSZSR101M6R3			C 1335	(B,18,63)		CKSSYB562K25		
C 1106	(B,32,100)		CKSSYB104K10			C 1336	(A,18,72)		CKSSYB104K10		
C 1107	(B,31,95)		CKSSYB103K16			C 1337	(A,16,72)		CKSRYB102K50		
C 1108	(B,23,105)		CKSSYB104K10			C 1338	(B,16,69)		CKSRYB102K50		
C 1109	(A,21,105)		CKSRYB473K25			C 1339	(A,15,72)		CKSRYB102K50		
C 1110	(A,30,106)		CKSRYB473K25			C 1340	(A,13,71)		CKSSYB104K10		
C 1111	(A,32,103)		CKSSYB103K16			C 1341	(B,16,66)		CCSSCH101J50		
C 1112	(A,22,94)		CKSRYB105K10			C 1342	(B,16,65)		CKSRYB391K50		
C 1113	(A,24,94)		CKSRYB105K10			C 1343	(B,16,63)		CKSRYB471K50		
C 1114	(A,31,102)		CKSSYB103K16			C 1344	(B,16,62)		CKSRYB331K50		
C 1121	(A,6,83)		CKSSYB221K50			C 1346	(A,8,71)		CKSRYB224K10		
C 1122	(A,2,79)		CKSRYB393K16			C 1347	(A,1,61)		CKSSYB104K10		
C 1124	(A,13,74)		CKSSYB221K50			C 1348	(A,1,57)		CKSSYB104K10		
C 1125	(B,16,76)		CKSSYB104K10			C 1349	(A,2,56)		CKSSYB104K10		
C 1126	(A,15,75)		CKSSYB104K10			C 1350	(A,2,52)		CKSSYB104K10		
C 1127	(B,17,76)		CKSSYB104K10			C 1351	(A,1,48)		CKSSYB104K10		
C 1128	(B,15,80)		CKSRYB472K50			C 1352	(A,1,46)		CKSSYB104K10		
C 1129	(A,22,79)		CKSSYB104K10			C 1355	(B,2,59)		CSZS100M6R3		
C 1132	(A,25,83)		CKSRYB561K50			<div>D</div> <div>Unit Number:CWX3154</div> <div>Unit Name:Compound Unit(A)</div>					
C 1133	(A,24,86)		CKSRYB561K50								
C 1134	(A,23,86)		CKSRYB273K16								
C 1135	(B,20,81)		CKSSYB473K10								
C 1136	(A,22,90)		CKSSYB104K10			Q 1299	Photo-taransistor	CPT231SCTD			
C 1137	(A,22,89)		CKSSYB104K10			S 1201	Spring Switch(12cm)	CSN1069			
C 1138	(A,14,89)		CKSSYB104K10			S 1202	Spring Switch(8cm)	CSN1069			
C 1139	(A,16,90)		CKSSYB104K10			S 1203	Spring Switch(DISC SENS)	CSN1069			
C 1201	(A,39,47)		CKSSYB104K10			S 1204	Spring Switch(DISC SENS)	CSN1070			
C 1204	(B,1,72)		CEVW101M16			S 1205	Spring Switch(8cm)	CSN1070			
C 1205	(A,39,36)		CKSRYB104K16			R 1298		RS1/16S0R0J			
C 1206	(B,45,35)		CKSRYB103K50			R 1299		RS1/16S0R0J			
C 1207	(B,45,34)		CKSRYB103K50			<div>E</div> <div>Unit Number:CWX3156</div> <div>Unit Name:Compound Unit(B)</div>					
C 1208	(B,51,42)		CCSSCH5R0C50								
C 1209	(B,51,45)		CCSSCH470J50								
C 1210	(A,51,52)		CKSSYB104K10								
C 1301	(A,6,42)		CKSSYB104K10			<div>F</div> <div>Unit Number:CWX3096</div> <div>Unit Name:CD Core Unit(S10.1)</div>					
C 1302	(A,13,41)		CKSSYB104K10								
C 1303	(A,15,41)		CKSRYB224K10								
C 1304	(A,20,42)		CKSSYB104K10								
C 1305	(A,23,41)		CKSRYB224K10								
C 1306	(A,32,45)		CKSSYB471K50								
C 1307	(A,33,52)		CKSSYB104K10								
C 1308	(A,31,52)		CKSRYB224K10			<div>MISCELLANEOUS</div>					
C 1309	(A,35,54)		CKSSYB104K10								
C 1310	(A,35,55)		CKSSYB104K10								
C 1311	(A,35,57)		CKSSYB103K16								
C 1312	(A,37,58)		CKSSYB103K16			IC 201	(A,39,24) IC	UPD63763GJ			
C 1313	(A,30,61)		CKSSYB104K10			IC 203	(B,45,78) IC	NJM2885DL1-33			
C 1314	(A,34,61)		CKSRYB224K10			IC 301	(A,49,88) IC	BA5835FP			
C 1315	(B,27,65)		CKSRYB102K50			IC 701	(A,48,51) IC	PE5454B			
C 1316	(B,24,65)		CKSRYB393K16			IC 703	(A,30,44) IC	S-812C33AUA-C2N			
C 1317	(A,30,68)		CKSSYB104K10			Q 101	(A,20,22) Transistor	2SA1577			
C 1318	(A,30,71)		CKSSYB103K16			Q 701	(B,62,59) Transistor	UN2111			
C 1319	(A,27,77)		CKSSYB104K10			L 203	(A,53,32) Inductor	CTF1389			
C 1320	(A,24,78)		CKSSYB103K16			L 207	(A,53,31) Inductor	CTF1389			
C 1329	(A,22,72)		CKSSYB104K10			L 209	(A,26,20) Inductor	CTF1389			
C 1330	(B,24,67)		CKSRYB183K50			L 703	(A,64,49) Inductor	CTF1389			
C 1331	(B,21,66)		CCSSCH470J50			X 201	(A,51,35) Ceramic Resonator 16.934MHz	CSS1603			
C 1332	(A,20,72)		CKSRYB224K10			X 701	(A,59,53) Ceramic Resonator 4.00MHz	CSS1652			
C 1333	(A,19,72)		CKSRYB105K10			S 901	(A,15,43) Switch(HOME)	CSN1067			
C 1334	(B,15,67)		CKSRYB102K50			S 903	(B,53,100) Switch(DSCSNS)	CSN1068			

**Circuit Symbol and No.****Part No.**

S 904 (B,35,108) Switch(12EJ)  
S 905 (B,48,109) Switch(8EJ)

CSN1067  
CSN1067

**Circuit Symbol and No.****Part No.**

R 773 (B,39,37)  
R 777 (B,48,51)  
R 778 (B,48,52)  
R 779 (B,45,54)  
R 901 (B,52,65)

RAB4CQ221J  
RS1/16SS221J  
RS1/16SS221J  
RS1/16SS221J  
RAB4CQ221J

**A RESISTORS**

R 101 (A,22,24) RS1/10SR2R4J  
R 102 (A,22,26) RS1/10SR2R4J  
R 103 (A,25,25) RS1/10SR2R7J  
R 201 (A,53,16) RS1/16SS102J  
R 202 (A,55,21) RS1/16SS333J

R 905 (B,54,60) RS1/16SS221J  
R 906 (B,56,68) RS1/16SS221J  
R 908 (B,45,69) RS1/16SS0R0J  
R 910 (B,44,69) RS1/16SS0R0J  
R 911 (B,40,73) RS1/16SS102J

R 221 (B,31,18) RS1/16SS103J  
R 222 (B,26,18) RS1/16SS103J  
R 225 (A,27,8) RS1/16SS103J  
R 226 (A,27,7) RS1/16SS393J  
R 227 (B,33,10) RS1/16SS562J

**CAPACITORS**

C 103 (B,14,8) 100μF/16V CCH1504  
C 105 (A,19,15) CKSSYB104K10  
C 108 (B,39,16) CKSSYB104K10  
C 110 (A,18,6) CKSSYB104K10  
C 201 (A,51,14) CKSSYB102K50

R 228 (B,36,8) RS1/16SS122J  
R 229 (B,34,8) RS1/16SS472J  
R 232 (B,35,10) RS1/16SS122J  
R 241 (B,42,28) RS1/16SS333J  
R 243 (B,44,28) RS1/16SS333J

C 202 (B,50,17) CKSSYB104K10  
C 203 (A,55,23) CKSSYB104K10  
C 204 (B,28,22) CEVW220M6R3  
C 205 (A,53,25) CKSSYB104K10  
C 208 (B,44,25) CKSSYB104K10

R 245 (A,39,38) RS1/16SS333J  
R 301 (A,48,78) RS1/16SS183J  
R 302 (A,42,78) RS1/16SS822J  
R 304 (A,50,78) RS1/16SS183J  
R 305 (A,42,77) RS1/16SS822J

C 209 (A,54,29) CKSSYB104K10  
C 212 (A,45,37) CKSRYB105K10  
C 216 (A,25,8) CKSSYB332K50  
C 217 (A,28,12) CKSSYB104K10  
C 218 (A,25,7) CKSSYB473K10

C R 307 (A,36,85) RS1/16SS183J  
R 308 (A,32,83) RS1/16SS183J  
R 309 (A,38,89) RS1/16SS183J  
R 310 (A,35,88) RS1/16SS183J  
R 601 (B,43,59) RS1/16S101J

C 219 (A,34,7) CKSSYB104K10  
C 220 (A,33,11) CKSSYB182K50  
C 221 (B,35,6) CKSSYB104K10  
C 222 (B,35,8) CCSSCH560J50  
C 223 (B,33,8) CCSSCH4R0C50

R 602 (B,41,62) RS1/16S101J  
R 606 (B,44,67) RS1/16S0R0J  
R 607 (B,43,56) RS1/16SS0R0J  
R 608 (B,36,67) RS1/16SS0R0J  
R 705 (B,50,59) RS1/16SS221J

C 224 (B,40,16) CKSSYB104K10  
C 225 (B,45,14) CKSSYB103K16  
C 226 (B,43,12) CCSSCH680J50  
C 227 (A,45,10) CCSSCH470J50  
C 228 (A,49,9) CKSSYB103K16

D R 706 (B,57,61) RS1/16SS221J  
R 707 (A,62,47) RS1/16SS473J  
R 708 (B,50,57) RS1/16SS221J  
R 710 (A,28,77) RS1/16SS102J  
R 711 (B,44,53) RS1/16SS221J

C 234 (B,36,81) CEVW221M4  
C 237 (B,38,29) CKSSYB104K10  
C 239 (B,34,10) CCSSCH220J50  
C 242 (B,58,32) CKSSYB104K10  
C 243 (B,39,76) CKSSYB104K10

R 714 (B,51,53) RS1/16SS473J  
R 716 (A,63,56) RS1/16SS472J  
R 719 (B,49,45) RS1/16SS221J  
R 720 (B,46,52) RS1/16SS471J  
R 724 (A,62,42) RS1/16S473J

C 244 (B,49,70) CKSSYB104K10  
C 246 (A,23,19) CKSSYB104K10  
C 251 (B,28,31) CKSRYB102K50  
C 260 (A,54,25) CKSSYB104K10  
C 301 (A,43,78) CKSSYB221K50

E R 725 (B,57,43) RS1/16SS222J  
R 726 (A,52,41) RS1/16SS103J  
R 727 (B,50,54) RS1/16SS473J  
R 729 (A,57,40) RS1/16SS223J  
R 730 (A,65,41) RS1/16SS473J

C 302 (A,50,79) CKSSYB221K50  
C 303 (A,37,85) CKSSYB472K25  
C 304 (A,39,89) CKSSYB103K16  
C 305 (B,34,92) CEVW101M16  
C 307 (B,56,90) CKSSYB104K10

R 731 (A,53,41) RS1/16SS104J  
R 737 (A,41,42) RS1/16SS104J  
R 740 (A,35,46) RS1/16SS473J  
R 742 (A,50,41) RS1/16SS104J  
R 746 (B,60,56) RS1/16SS104J

C 601 (B,46,60) CCSRCH102J50  
C 602 (B,41,65) CCSRCH102J50  
C 701 (A,64,46) CKSSYB104K10  
C 703 (B,50,61) CKSSYB103K16  
C 706 (B,50,62) CKSSYB104K10

F R 750 (A,39,59) RS1/16SS473J  
R 754 (B,48,60) RS1/16SS102J  
R 755 (A,43,61) RS1/16SS102J  
R 765 (B,51,40) RAB4CQ221J  
R 769 (B,48,40) RAB4CQ221J

C 707 (A,36,45) CKSSYB104K10  
C 712 (A,22,42) CKSRYB224K16  
C 714 (B,60,45) CKSSYB104K10

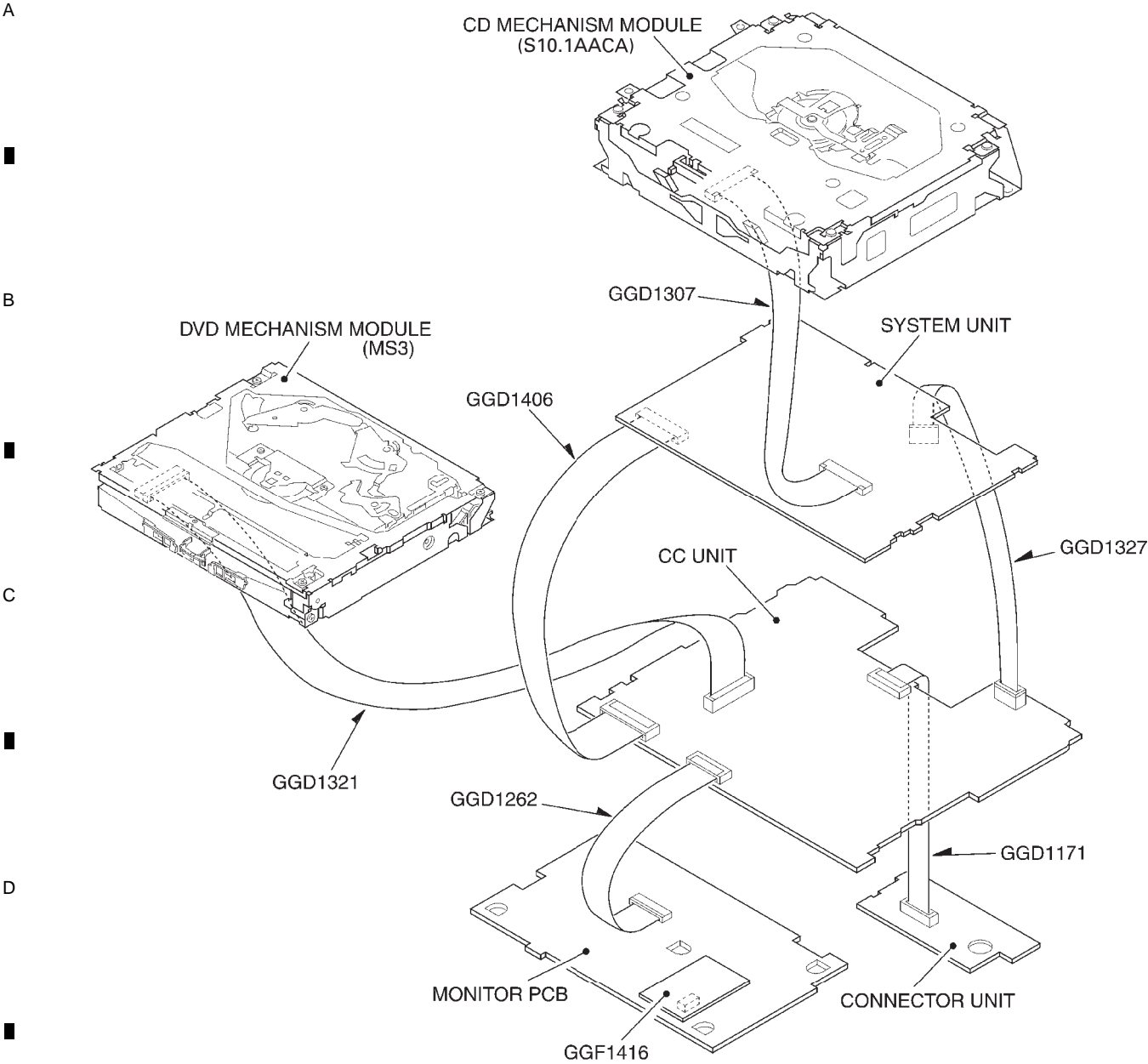
	5		6		7		8	
	<b><u>Circuit Symbol and No.</u></b>		<b><u>Part No.</u></b>					
C 716	(A,61,40)		CKSSYB103K16					
C 722	(B,52,48)		CKSQYB475K6R3					
C 723	(A,26,41)		CKSRYB105K10					A
C 903	(B,56,70)		CKSSYB471K50					
C 906	(A,40,77)		CKSRYB224K16					
C 907	(A,47,76)		CKSSYB103K16					
C 910	(B,60,71)		CKSQYB225K10					

**Miscellaneous Parts List**

	Pickup Unit(Service)	CXX1815	
M 1	Motor Unit(LOADING)	CXC4659	
M 2	Motor Unit(CARRIAGE)	CXC4314	
M 3	Motor(SPINDLE)	CXM1308	
	Pickup Unit(P10)(Service)	CXX1641	B
M 1	Motor Unit(SPINDLE)	CXC4440	
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933	
M 10	Motor Unit(FLAP)	CZX5102	
	LCD Panel	CWX3229	
	Fan Motor	CXM1320	

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM



● Jigs List

Name	Jig No.	Remarks
45-Pin FFC	GGD1321	DVD Mechanism Module(MS3)(CN601) <--> CC Unit(CN2)
23-Pin BBR FFC	GGD1307	CD Mechanism Module(S10.1)(CN901) <--> System Unit(CN1301)
80-Pin FFC	GGD1406	System Unit(CN1701) <--> CC Unit(CN605)
20-Pin Extension Cord	GGD1327	System Unit(CN1802) <--> CC Unit(CN801)
30-Pin FFC	GGD1171	CC Unit(CN702) <--> Connector Unit(CN2804)
33-Pin FFC	GGD1262	CC Unit(CN701) <--> Monitor PCB(CN5002)
Monitor Adjustment PCB	GGF1416	For OSD display (*1)
Test Disc	GGV1237	Operation check
Test Disc	TCD-782	Checking the grating(CD)
L.P.F.		Checking the grating(Two pieces)
Test Disc	GGV1018	Checking the grating(DVD)

\*1) Since this product does not have OSD IC, OSD for adjustment is displayed by using GGF1416 at the time of monitor adjustment.



### 1) Precautions

This product uses 5V and 3.3V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2V) and VHALF (approximately 1.65V).

During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser diodes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

Attention)

- Test mode starting procedure  
Please select "MS3 check" to start test mode.
- Test mode stopping procedure  
ACC and Backup OFF.

# ● Front-End test mode flow chart

A

B

C

D

E

F

Start test mode

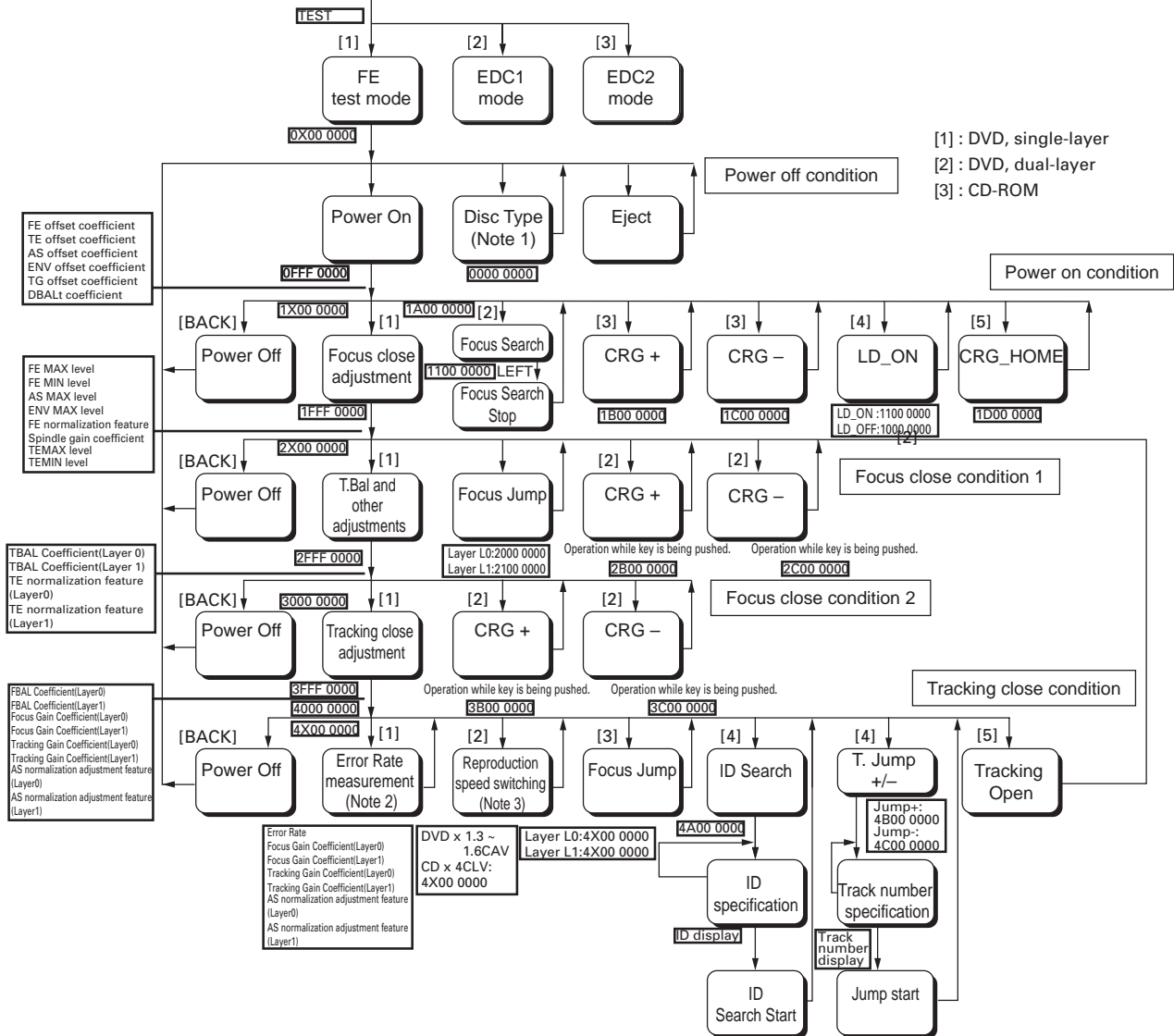
Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.

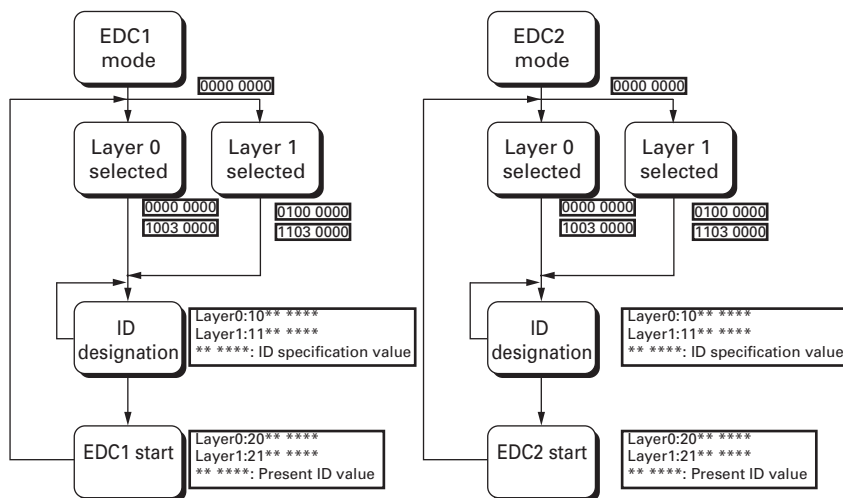
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.

Note 3: Reproduction (play) speed is selectable from

DVD : x1.3 1.6CAV, CD : x 4CLV Fixation

Note 4: Gain change: Normal gain -> OEIC=H -> OEIC=H and FEP x 4 AMP ON





F-close and F-search cannot be executed, unless LD-ON is set.

[If F-close isn't executed within 9 seconds after LD-ON, it switches to LD-OFF automatically.

And even if F-search is executed within 9 seconds after LD-ON, it also switches to LD-OFF.]

Please carry out F-close after carrying out power-off at once and carrying out power-on again, when carrying out F-close after performing F-search.

The track number designation is selected from the track numbers already prepared for selection. Switching to cyclic operation is made at step ①, and the decision is finalized (entered) in step ③.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

- A number of digits are determined through commands RIGHT and LEFT. Numerical UP/DOWN operations are performed through commands ① and ②. The decision is finalized (entered) with command ③.

Display

Error Code List

Error status from DVD microcomputer	Contents	Display
0X50	Mecha. error	No display
0X40	No disc	No display
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Different region disc	DIFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

Error Code	Contents	Display
0X99	Data cannot read	Please confirm the disc
0X80	The address cannot be found	Please confirm the disc
0X90	Focus error	Please confirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carriage home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please confirm the disc
0X94	ID/Subcode cannot be read	Please confirm the disc
0X95	High spindle rotation	DVD is stopping because mechanism detected abnormality
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please confirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecoveryNG(BE)	DVD is stopping because mechanism detected abnormality
0X9C	Play state error	
0X9D	Disc data error	
0X9E	Serface error (Disc distinction is improper)	

## ● Skew adjustment

The skew adjustment is to adjust the pickup and the flatness of the disc so that the beam from the pickup continues to go to the disc vertically. In MS3 mecha, the pickup shaft on the inner track near the carriage motor is fixed, so the fixed position is regarded as the standard and the flatness is adjusted. Observing the RF waveform on the oscilloscope, repeat the adjustment on the inner track position and the outer track position, and narrow the adjusted value.

If any of the following replacements have been performed on the system, adjustments for pick up, must be conducted:

1. Pick up unit replacement
2. Spindle motor replacement
3. Carriage chassis replacement
4. Pick up unit main shaft replacement
5. Pick up unit sub-shaft replacement

Measurement device and tools : Oscilloscope  
 Allen key wrench  
 Screw lock (GYL1001)

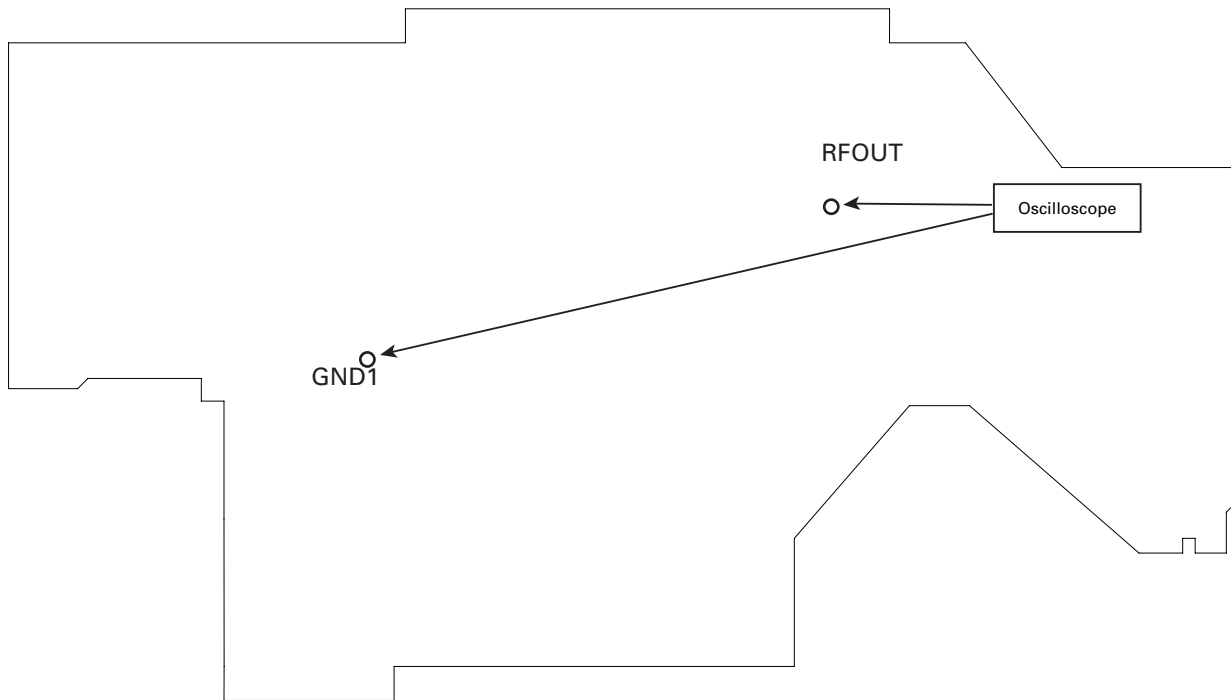
Disk used : GGV1018

Measurement reference : GND1

Measurement point : RFOUT

Connection diagram

DVD core unit





Symptoms in case of poor adjustment: Error efficiency deteriorated:  $10^{-3}$  (Optimum value:  $10^{-4}$  or lower)

High jitter of the RF signal RF waveform deformed

Unstable operation in tracking closing and servo control

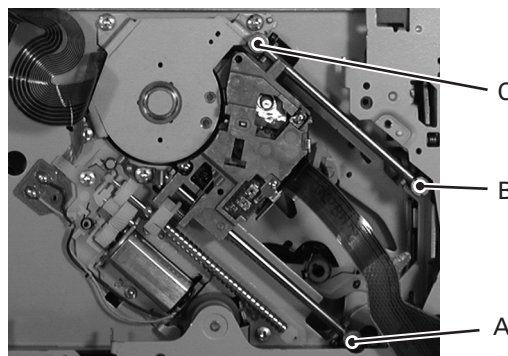
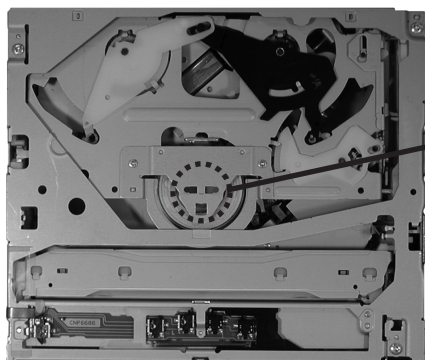
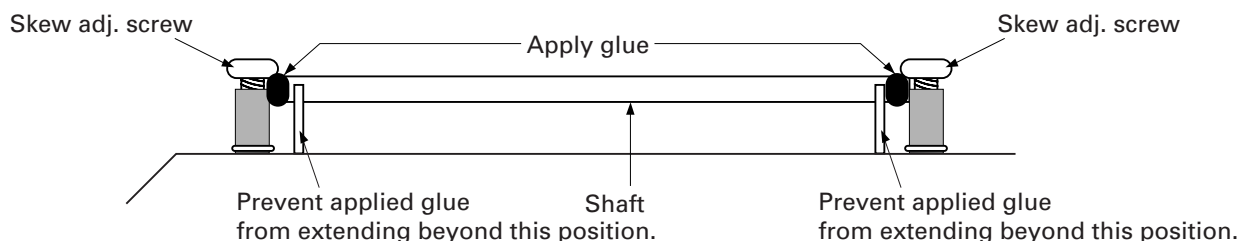
Caution: Avoid exposing your eyes to laser beams for a long time.

Preparation for adjustment: Clean both ends of the shafts.

Use brand new skew screws supplied with the service kit GXX1234.

#### Procedures:

1. Place the DVD mechanism module upside down.  
To avoid the disc from being robbed when it is turned upside down, first put a coin of about 1.5 mm on the table, then turn the disc upside down and set it so that the ① in the figure comes to the point immediately above the coin.
2. After replacing the pickup (by referring to the procedures of "Removing the Pickup."), roughly adjust the three skew screws through visual check so that the pickup is mounted in parallel to the CRG chassis around the inner and outer tracks.
3. Connect an oscilloscope as shown in the connecting diagram.
4. Turn on the power of the product. Load the test disc (GGV1018).
5. In the front-end test mode, set the disc type to DVD layer 1. Then, turn on the power. Move the pickup toward the inner tracks.
6. Turn on the laser diodes.
7. With the focus servo closed, complete all automatic adjustments. Close the tracking servo, and then complete all automatic adjustments.
- 8 Follow the next procedures, from 8-1 to 8-5, and adjust the (three) skew screws.
- 8-1 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level of oscilloscope becomes the maximum.  
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the adjustment screw C)
- 8-2 Move the pickup toward the outer track and turn the skew adjustment screw B so that the RF level becomes the maximum.  
(Tangential adjustment at the outer track position: Adjust the flatness of the disc at the outer track position with the adjustment screw B)
- 8-3 Leave the pickup at the outer track position and turn the skew adjustment screws A and B in the same direction alternately one quarter at a time (A•B•A•B ...) so that the RF level becomes the maximum.  
(Radial adjustment at the outer track position: Keeping the flatness at the outer track position, adjust the flatness of the whole disk with the adjustment screws A and B)
- 8-4 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level becomes the maximum.  
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the adjustment screw C)
- 8-5 Repeat the steps from 8-2 to 8-4 three times, and adjust at the position where the RF level becomes the maximum.
9. Turn off the power in the test mode. After confirming that the disc has stopped, eject the disc.
10. Adjust with a screw rock the shaft and skew adjustment screw to the same state as initial one.



## 6.3 CD ADJUSTMENT

A

### 1) Cautions on adjustments

- In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.

If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:

B

a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.

b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.

c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

C

- Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

- For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

D

- In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

- The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

- The load and eject operation is not guaranteed with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

### 2) Test mode

This mode is used to adjust the CD mechanism module.

- To enter the test mode.

While pressing the ANGLE and SOURCE keys at the same time, reset.

- To exit from the test mode.

Turn off the ACC and back up.

#### Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.

b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.

c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.

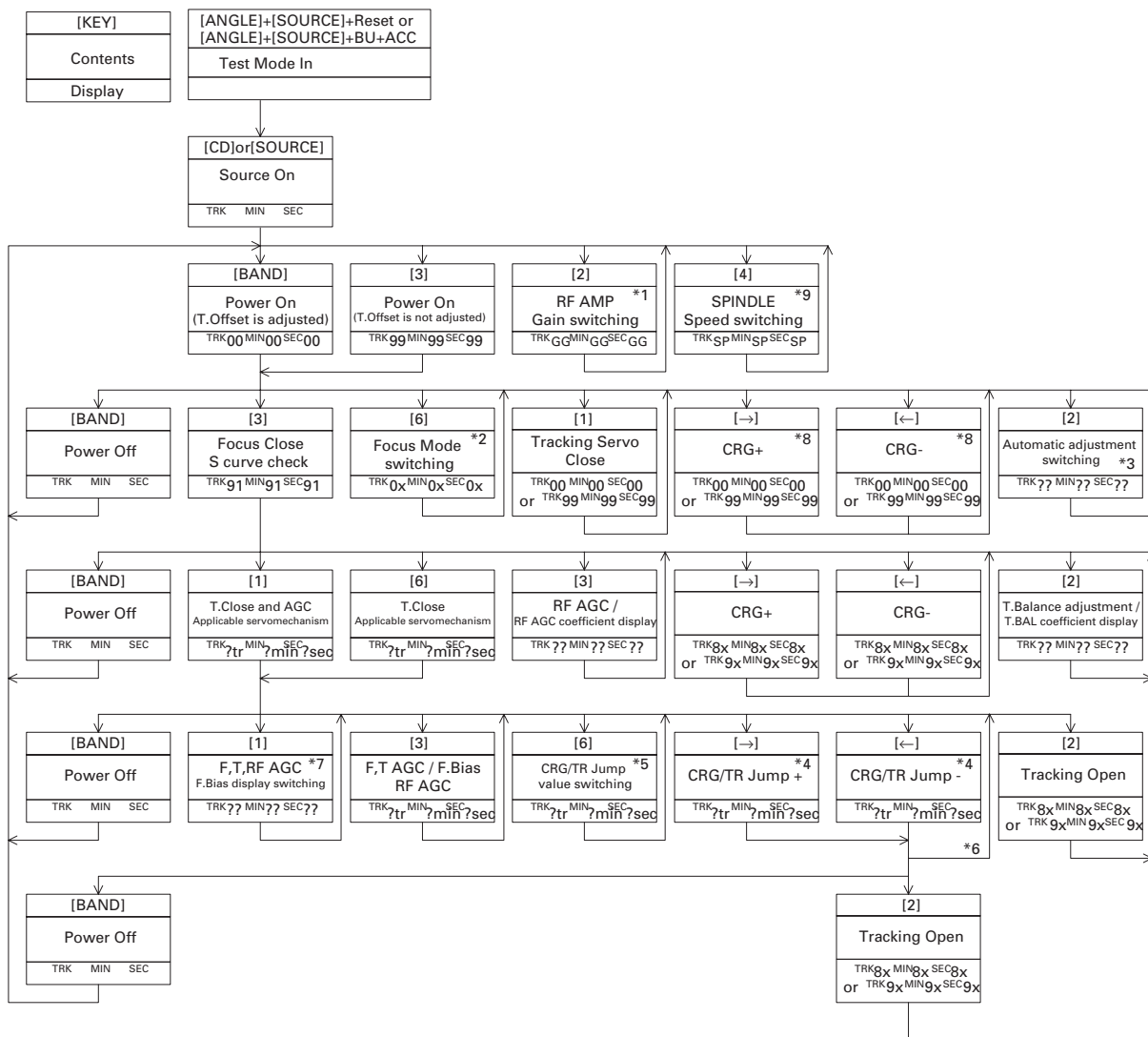
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.

e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

E

F

## Flow Chart



- \*1) TYP → -6dB → -12dB  
TRK MIN SEC → TRK 06 MIN 06 SEC 06 → TRK 12 MIN 12 SEC 12
- \*2) Focus Close → S.Curve check setting → F.EQ measurement setting  
TRK 00 MIN 00 SEC 00 → TRK 01 MIN 01 SEC 01 → TRK 02 MIN 02 SEC 02  
(TRK 99 MIN 99 SEC 99)
- \*3) F.Offset Display → T.Offset Display → Switch to the order of the original display
- \*4) 1TR / 32TR / 100TR
- \*5) Single TR → 32TR → 100TR → CRG Move  
9x(8x) : 91(81) 92(82) 93(83) 94(84)
- \*6) Only at the time of CRG move, 100TR jump
- \*7) TRK/MIN/SEC → F.AGC → T.AGC → F.Bias → RF AGC
- \*8) CRG motor voltage = 2[V]
- \*9) Applicability : A, B, C, D, E, F  
TYP(1X) → 2X → 1X  
TRK MIN SEC → TRK 22 MIN 22 SEC 22 → TRK 11 MIN 11 SEC 11

As for the double speed (2x), audio output cannot be supported

- Applicability : G  
TYP(2X) → 1X → 2X  
TRK MIN SEC → TRK 11 MIN 11 SEC 11 → TRK 22 MIN 22 SEC 22

[Key]	Operation
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
[4]	SPDL 1X / 2X switching As for the double speed (2x), audio output cannot be supported.
[5]	Error Rate measurement 1st - ON : ERR count Beginning (30Sec) 2nd - ON : BER display data [%]
[6]	F.Mode switching / Tracking Close / CRG • TR Jump switching

## 6.4 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT



### • Note :

The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

### • Purpose :

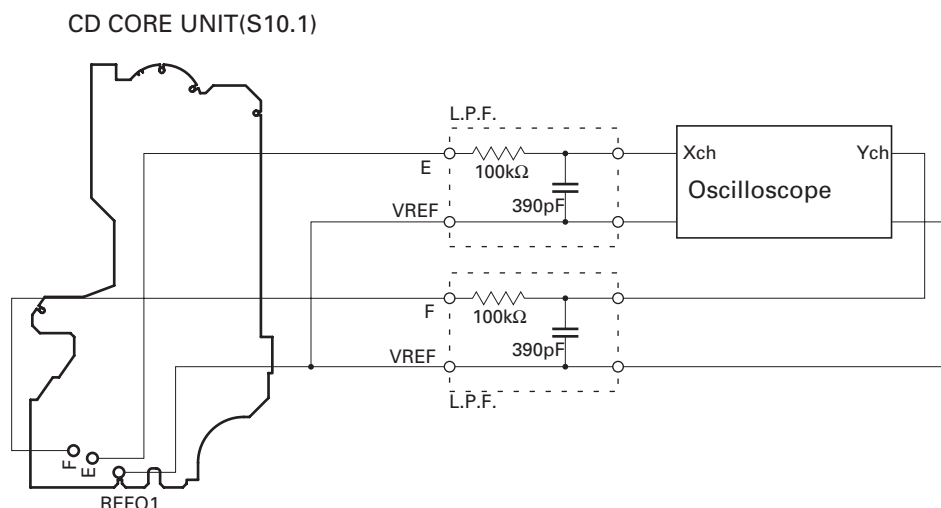
To check that the grating is within an acceptable range when the PU unit is changed.

### • Symptoms of Mal-adjustment :

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

### • Method :

- |                       |                            |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points    | • E, F, REFO1              |
| • Disc                | • TCD-782                  |
| • Mode                | • TEST MODE                |



### • Checking Procedure

1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within  $75^\circ$ . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than  $75^\circ$  try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than  $75^\circ$  then the mechanism should be judged to be at fault.

### • Note

Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" ( the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

### • Hint

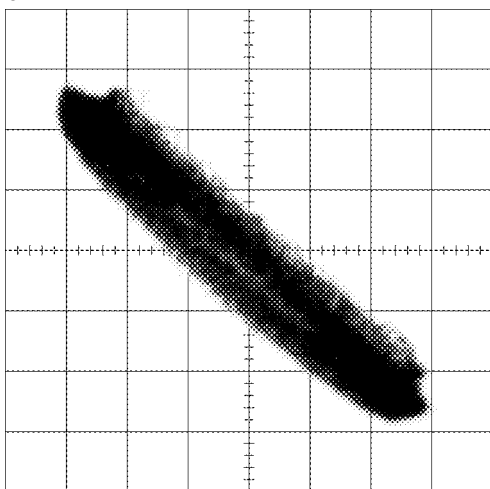
Reloading the disc changes the clamp position and may decrease the "wobble".

# Grating waveform

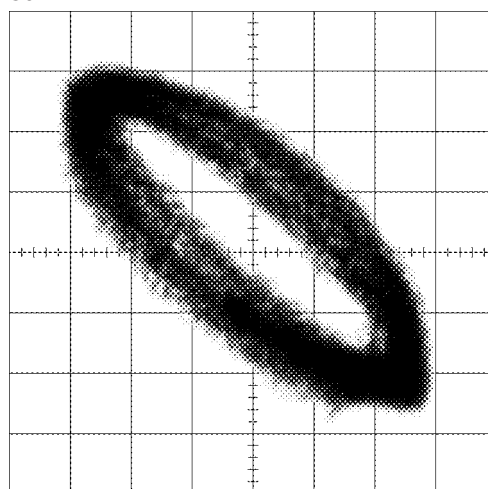
Ech → Xch 20mV/div, AC

Fch → Ych 20mV/div, AC

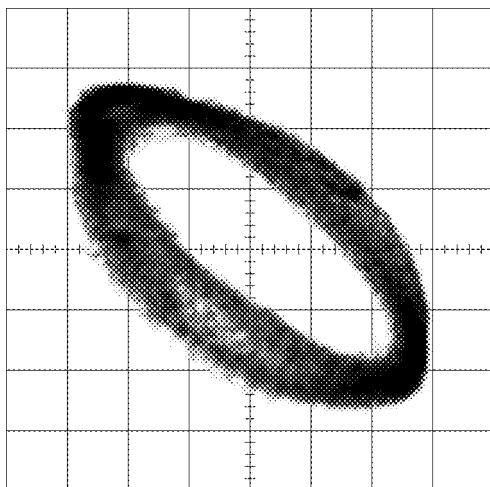
0°



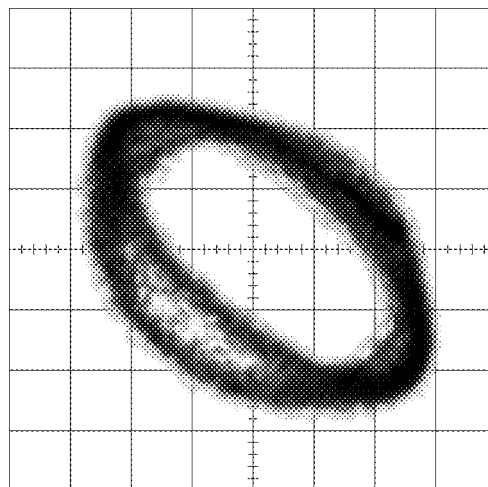
30°



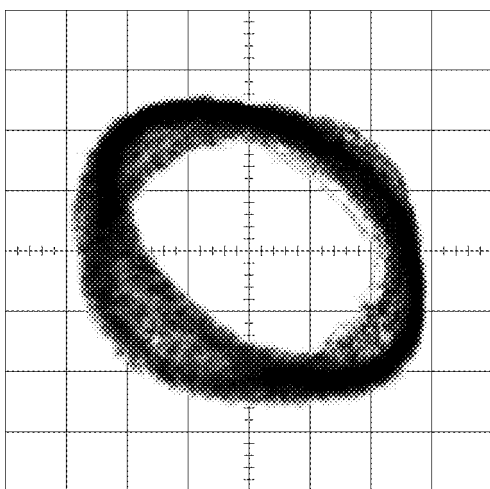
45°



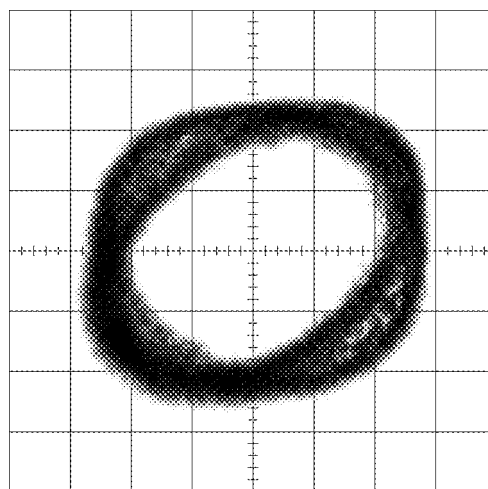
60°



75°



90°



## 6.5 ERROR MODE

### ● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation. The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

#### (1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

#### 2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

8 digits	6 digits	4 digits
ERROR-xx	ERR-xx	E-xx
	OR	
	Err-xx	

#### (2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)

If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.

The upper digits of error code is mainly classified by 3 kinds as follows:

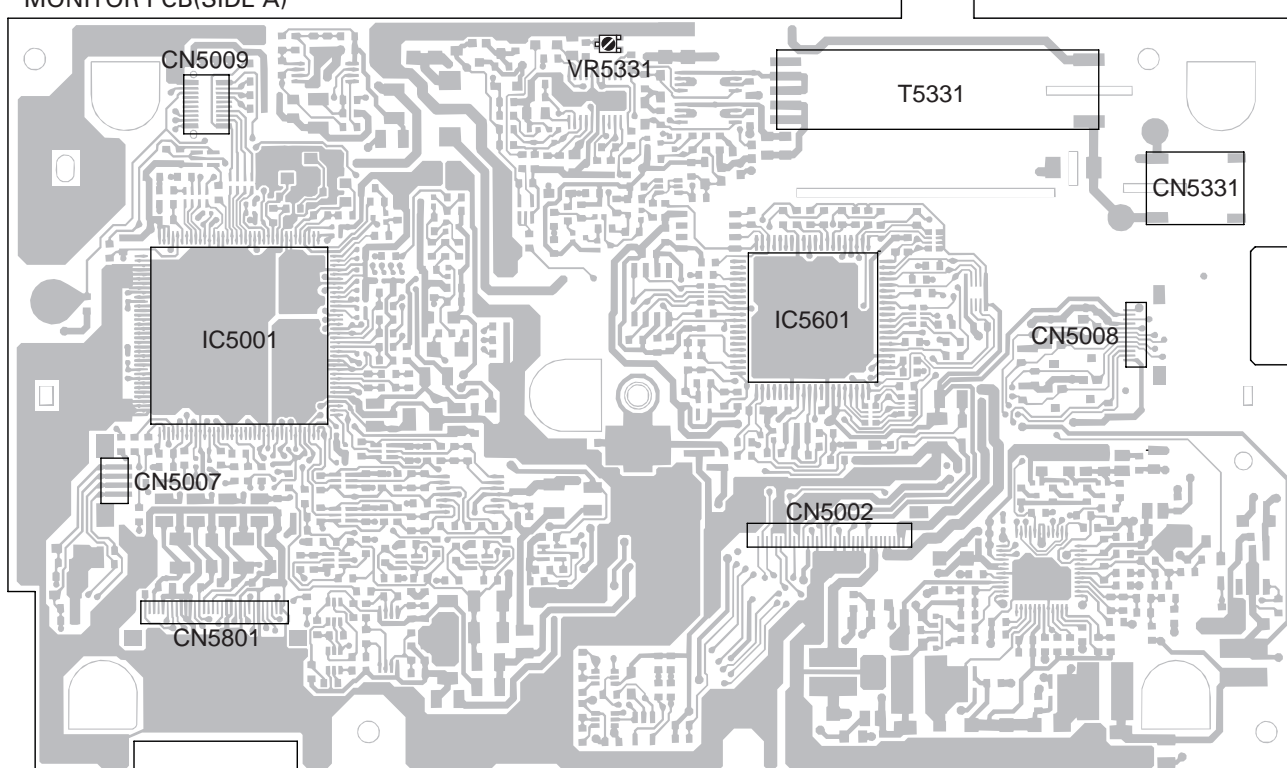
1x: Setup related error, 3x: Search related error, Ax: Other errors.

## 6.6 MONITOR PCB ADJUSTMENT

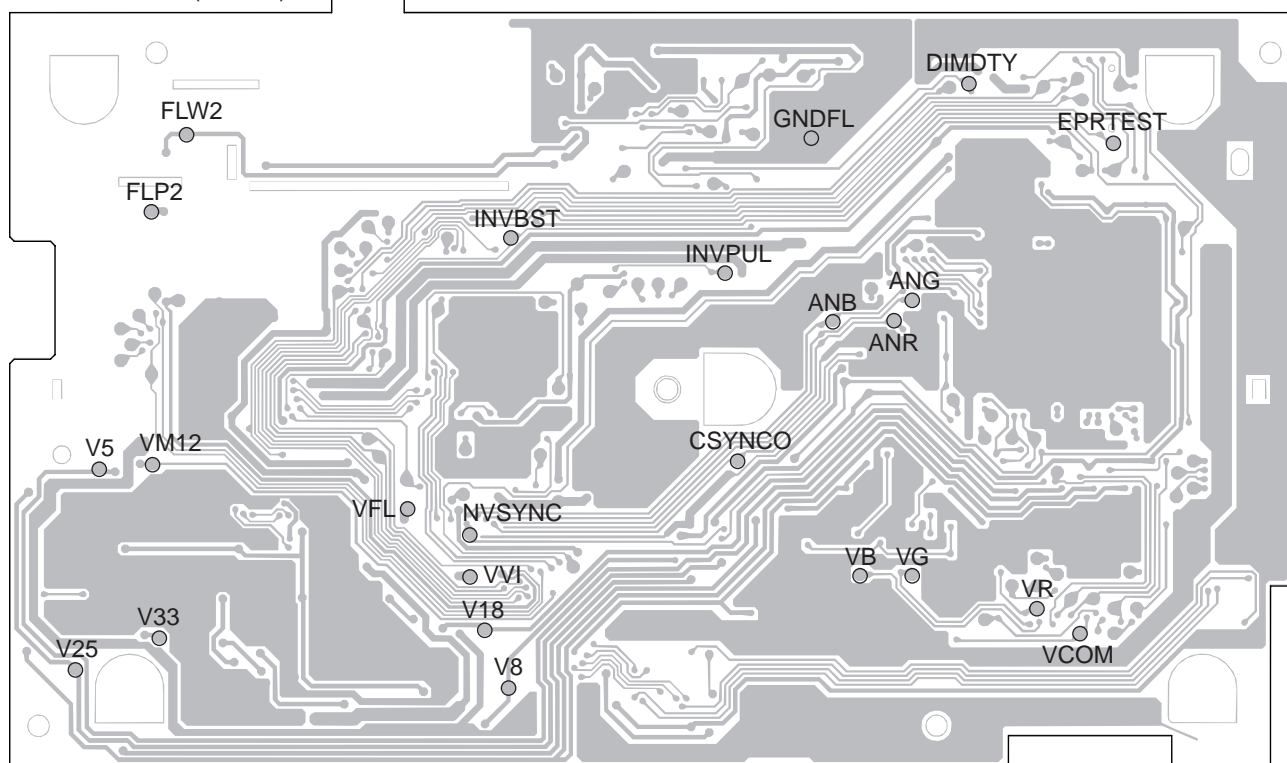


### ● Adjustment point

MONITOR PCB(SIDE A)



MONITOR PCB(SIDE B)





A  
B  
C  
D  
E  
F

1

2

3

4

Notes:

When the power supply for TC90A64AF-P (IC4001) is OFF, be careful not to apply any voltage to its terminals except for IIC lines(SDA and SCL). The IIC lines can accept a maximum of 5V.

No	Adjustment item	Input	Measuring point	Adjusting point	Measuring method and specs.	Remarks
1	3.3V power supply verification	Apply 14.4V to TP VVI.	(TP V33)	—	$V33 = 3.3V \pm 0.3V$	
2	2.5V power supply verification	Apply 14.4V to TP VVI.	(TP V25)	—	$V25 = 2.5V \pm 0.2V$	
3	5V power supply verification	Apply 14.4V to TP VVI.	(TP V5)	—	$V5 = 5.0V \pm 0.3V$	
4	8V power supply verification	Apply 14.4V to TP VVI.	(TP V8)	—	$V8 = 8.0V \pm 0.6V$	
5	18.5V power supply verification	Apply 14.4V to TP VVI.	(TP V18)	—	$V18 = 18.5V \pm 0.8V$	
6	-12V power supply verification	Apply 14.4V to TP VVI.	(TP VM12)	—	$VM12 = -12.0V \pm 0.6V$	

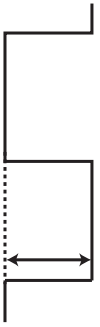




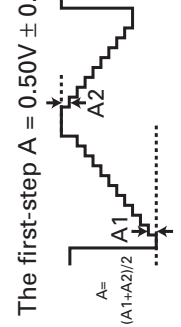
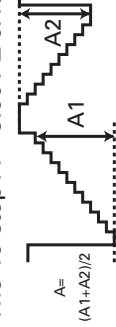
1

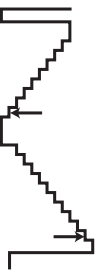
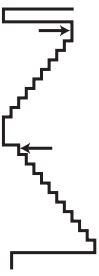
2

3

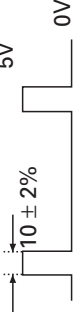

4



No	Adjustment item	Input	Measuring point	Adjusting point	Measuring method and specs.	Remarks
7	Vcom amp output Voltage waveform Verification	Any input signal	TP VCOM	—	 $4.50V \pm 0.20V$	
8	Input waveform verification (RGB)	Apply a white 100% signal to TP AVR,ANG, ANB.	TP ANR,ANG, ANB	—	 $0.65V \pm 0.02V$	The signal generator should be used via 75 ohms. (specs in desining : $75.0 \pm 0.2ohms$ )
9	Input waveform verification (SYNC)	Apply a synchronizing signal to TP NVSYNC.	TP NVSYNC	—	 $3.3V \pm 0.1V$	
10	Input waveform verification (composite)	Apply a white 100% signal to TP CSYNCO.	TP CSYNCO	—	 $1.0V \pm 0.02V$	The signal generator should be used via 75 ohms.
11	RGB amp output voltage waveform verification	Apply a black signal to TP ANR,ANG,ANB. (Video level:0%)	TP VG	—	 $3.9V \pm 0.2V$	The input signal has no setup. (Apply a black signal to TP CSYNCO)
12	Gamma 0 Verification	Apply a 10-step signal to TP ANR,ANG,ANB.	TP VG	—	 The first-step $A = 0.50V \pm 0.1V$ $A = (A1+A2)/2$	The input 10-step signal has no setup.
13	Gamma 2 verification	Apply a 10-step signal to TP ANR,ANG,ANB.	TP VG	—	 The 10-step $A = 3.00V \pm 0.15V$ $A = (A1+A2)/2$	The input 10-step signal has no setup. If the measured value is out of specs, change the setting of SA24h D11-8 (γ2 inflection point: GAMMA2 in the line adjustment 1 mode) (Register setting specs: $6 \pm 1$ )

No	Adjustment item	Input	Measuring point	Adjusting point	Measuring method and specs.	Remarks
14	B SUB BRIGHT	Apply a 10-step signal to TP ANR, ANG, ANB.	TP VG and VB	Register setting of SA39h D11 - 8	Adjust the first step levels of the G waveform and the B waveform. 	Register setting specs : $8 \pm 2$ (specs in designing: $8 \pm 1$ ) In the Line adjustment 2 mode, SUB BRI B can be used as the adjusting point.
15	B SUB CONTRAST	Apply a 10-step signal to TP ANR, ANG, ANB.	TP VG and VB	Register setting of SA26h D7 - 1	Adjust the 10th step levels of the G waveform and the B waveform. 	Register setting specs: $64 \pm 3$ (specs in designing: $64 \pm 2$ ) In the Line adjustment 2 mode, SUB CON B can be used as the adjusting point.
16	R SUB BRIGHT	Apply a 10-step signal to TP ANR, ANG, ANB.	TP VG and VR	Register setting of SA39h D15 - 12	Adjust the first step levels of the G wave form and the R waveform.(Measuring point is the same as that of No.14.)	Register setting specs: $8 \pm 2$ (specs in designing: $8 \pm 1$ ) In the Line adjustment 2 mode, SUB BRI R can be used as the adjusting point.
17	R SUB CONTRAST	Apply a 10-step signal to TP ANR, ANG, ANB.	TP VG and VR	Register setting of SA26h D15 - 9	Adjust the 10th step levels of the G waveform and the R waveform.(Measuring point is the same as that of No.15.)	Register setting specs: $64 \pm 3$ (specs in designing: $64 \pm 2$ ) In the Line adjustment 2 mode, SUB CON R can be used as the adjusting point.
18	Horizon dot position	Any input signal	—	Register setting of SA2Ah D3 - 0	6(0110)	After being written in, the setting value of EEPROM is checked. 2 mode, DOT CLK can be used as the adjusting point.
19	Aging	Any input signal	—	—	Keep the unit in the operation mode for 30 minutes or longer.	
20	Flicker	Input a signal for alternate white and black lines to TP ANR, TP ANG and TP ANB.	Screen	Register setting of SA22h D15 - 8	Adjust so that the flickers become minimum in all	If it input a signal for alternate white into TP CVBS, it is possible. (However, adjustment by RGB has priority.) The luminance level of the input signal: 50%. In the flicker adjustment mode, COM DC can be used as the adjusting point.

Flicker adjustment has been deviated The images flicker.

No	Adjustment item	Input	Measuring point	Adjusting point	Measuring method and specs.	Remarks
21	BACK LIGHT DRIVE FREQUENCY	Apply 14.4V ± 0.2V to TP VFL TP GNDFL : GND TP INVPUL : GND TP DIMDTY : GND TP INVBST : GND	TP : FLP2 TP : FLW2	VR 5331	48.0 ± 0.1kHz	100k ohms is connected between TP FLP2 and TP FLW2. It acts as the monitor of the waveform after potential. Don't acts as the monitor of the TP FLW2 directly. (there is a possibility that a measuring instrument may be destroyed, for high voltage.) Out of spec., when frequency change of following may become
22	FREQUENCY CHANGE CHECK	Apply wave of 98.0 ± 1kHz to TP INVPUL 	TP : FLP2 TP : FLW2		49.0 ± 0.5kHz	It checks that the waveform after potential is set to 49 kHz
23	FREQUENCY CHANGE CHECK	Apply wave of 104.0 ± 1kHz to TP INVPUL 	TP : FLP2 TP : FLW2		52.0 ± 0.5kHz	It checks that the waveform after potential is set to 52 kHz

## ●EEPROM setting mode

\*) Since this product does not have OSD IC, OSD for adjustment is displayed by using GGF1416 at the time of monitor adjustment.

[Operations]

To enter the setting mode, while keeping the EPRTTEST terminal at "Low",

Flicker adjustment mode

Line adjustment 1 mode

Line adjustment 2 mode

Dimmer parameter setting mode

[ ↑ ↓ ] button: Used to select a desired adjustment item in each mode

[ ← → ] button: Used to adjust the selected item

Notes:

1) The setting values are written in the EEPROM and then the read-out data is displayed on the screen.

WRITE and READ operations are processed by the block data of 16 bits.

The total bits for the settings depend on adjusting items.

2) For CS (Check Sum) items, when the settings are changed, the CS value is written in 8 bits by applying the exclusive OR (XOR). The CS value is first written in the EEPROM and then the read-out data is displayed.

If the written data is different from the read-out data, the letter color for the read-out data is changed.

## ● Memory items and addresses on the EEPROM(S-29221BROI-J8T1)

EEPROM address	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0	
00H	Dimmer external light threshold (high)								Dimmer external light threshold (low)								
01H	Backlight output (upper limit)								Backlight output (lower limit)								
02H	Common reverse output center (COM DC) PIP SA:22h[B15-8]								Common reserve output amplitude (COM AMP) PIP SA:22h[B7-2]						Don't care		
03H	Don't care		Output clamp DC (RGB BIAS) PIP SA:23h[B13-8]						Don't care				γ 0 inflection point (GAMMA 0) PIP SA:23h[B3-0]				
04H	γ 3 inflection point (GAMMA 3) PIP SA:24h[B15-12]					γ 2 inflection point (GAMMA 2) PIP SA:24h[B11-8]			γ 1 inflection point (GAMMA 1) PIP SA:24h[B7-3]					Don't care			
05H	Output sub contrast R (SUB CON R) PIP SA:26h[B15-9]							Don't care	Output sub contrast B (SUB CON B) PIP SA:26h[B7-1]							Don't care	
06H	Sub brightness R after γ circuit (SUB BRI R) PIP SA:39h[B15-12]				Sub brightness B after g circuit (SUB BRI B) PIP SA:39h[B11-8]				Don't care								
07H	Don't care								Don't care				Clock phase adjustment (DOT CLK) PIP SA:2Ah[B3-0]				
08H	Don't care								Don't care						Sharpness (SHARPNESS) PIP SA:05h[B2-1]		Don't care
09H-1BH	Don't care																
1CH	Check sum address (00h-1bh)																
1DH	Don't care								Common reverse output center(Reference)								
1EH	Don't care												Clock phase adjustment initial value				
1F-3F	Don't care																
40	External light of dimmer adjustment(H)								Back light of dimmer adjustment(H)								
41	External light of dimmer adjustment(M)								Back light of dimmer adjustment(M)								
42	External light of dimmer adjustment(L)								Back light of dimmer adjustment(L)								
43-7F	Don't care								Don't care								

## EEPROM initial value

Item	Meaning	initial value(hex)	initial value(DEC)
COM_DC	Common reverse output center	8C	140
COM_AMP	Common reverse output amplitude	1E	30
RGB_BIAS	Out clamp DC	00	00
GAMMA0	$\gamma$ 0	02	02
GAMMA3	$\gamma$ 3	04	04
GAMMA2	$\gamma$ 2	06	06
GAMMA1	$\gamma$ 1	11	17
SUB_CON_R	Output sub contrast R	40	64
SUB_CON_B	Output sub contrast B	40	64
SUB_BRI_R	Sub brightness R after $\gamma$ circuit	08	08
SUB_BRI_B	Sub brightness B after $\gamma$ circuit	08	08
DOT_CLK	Clock phase adjustment	06	06
SHARPNESS	Sharpness	03	03
BL_MAX	Back light output (Max.)	C4	196
BL_MIN	Back light output (Min.)	60	96
REF_HIGH	Dimmer (H)	B0	176
REF_LOW	Dimmer (L)	50	80
LUM_HIGH	External light (H)	E2	226
LUM_MID	External light (M)	87	135
LUM_LOW	External light (L)	43	67
BL_HIGH	Back light (H)	C4	196
BL_MID	Back light (M)	C4	196
BL_LOW	Back light (L)	70	112

**[Displays in each mode]**

In the following figures, the letters and numbers surrounded by a large square are for OSD examples.

On the screen, the adjustment names and the settings (or written data) are listed.

The settings (or written data) will change when some adjustments are made in each mode.

\* The following examples show the maximum values.

**(1) Flicker adjustment mode**

Adjustment item	Adjustment range	Adjustable name	Settings or written data (DEC)		
Common reverse output center	[0 - 255]	COM DC	255		

## (2) Line adjustment 1 mode

Adjustment item	Adjustment range	Adjustable name	Settings or written data (DEC)		
Bright (SA22: B7-2)	[0 - 63]	BRIGHT	63		LINE1
Contrast (SA25: B7-1)	[0 - 127]	CONTRAST	127		
Common reverse output center	[0-255]	COM DC	255		
Common reverse output amplitude	[0-63]	COM AMP	63		
Output clamp DC	[0-63]	RGB BIAS	63		
Y0 inflection point	[0-15]	GAMMA0	15		
Y3 inflection point	[0-15]	GAMMA3	15		
Y2 inflection point	[0-15]	GAMMA2	15		
Y1 inflection point	[0-31]	GAMMA1	31		
				CS	FF

## Notes:

## 1) CONTRAST data

The CONTRAST data is adjustable, and used as reference data for other adjustment items, which is not memorized in the EEPROM.

## 2) BRIGHT and COM AMP data

The BRIGHT and COM AMP adjustments are made by using the same 2-screen IC register(SA22h B7-2: common reverse output amplitude).

Therefore, adjusting one of the data will change the other one.

## (3) Line adjustment 2 mode

Adjustment item	Adjustment range	Adjustable name	Settings or written data (DEC)		
Bright (SA22: B7-2)	[0 - 63]	BRIGHT	63		LINE2
Contrast (SA25: B7-1)	[0 - 127]	CONTRAST	127		
Output sub contrast R	[0 - 127]	SUB CON R	127		
Output sub contrast B	[0 - 127]	SUB CON B	127		
Sub brightness R after Y circuit	[0 - 15]	SUB BRI R	15		
Sub brightness B after Y circuit	[0 - 15]	SUB BRI B	15		
Clock phase adjustment	[0 - 15]	DOT CLK	15		
Sharpness	[0 - 3]	SHARPNESS	3		
				CS	FF

## Notes:

## 1) CONTRAST data

The CONTRAST data is adjustable, and used as reference data for other adjustment items, which is not memorized in the EEPROM.

## 2) SUB BRI R and SUB BRI B data

The displayed value or EEPROM written data is different from the setting value for the 2-screen IC register (IC4001 : TC90A64AF-P).

(Before displayed on the screen, the setting value is converted via some software.)

Displayed value (adjusting value) (DEC)	EEPROM written value. (DEC)	2-screen IC register setting (BIN)	
15	15	0111	(MAX)
14	14	0110	
.	.	.	
9	9	0001	
8	8	0000	(TIP)
7	7	1111	
.	.	.	
1	1	1001	
0	0	1000	(MIN)

#### (4) Dimmer parameter setting mode

Adjustment item	Adjustment range	Adjustable name	Settings or written data (DEC)		
Backlight output (MAX)	[0 - 255]	BL MAX	FF		DIMMER
Backlight output(MIN)	[0 - 255]	BL MIN	FF		
Dimmer threshold (high)	[0 - 255]	REF H	FF		
Dimmer threshold (low)	[0 - 255]	REF L	FF		
External light point (high)	[0 - 255]	LUM H	FF		
External light point (middle)	[0 - 255]	LUM M	FF		
External light point (low)	[0 - 255]	LUM L	FF		
Backlight point (high)	[0 - 255]	BL H	FF		
Backlight point (middle)	[0 - 255]	BL M	FF		
Backlight point (low)	[0 - 255]	BL L	FF	CS	FF

Note:

The dimmer point data is memorized in the EEPROM, but not treated as a CS item.  
It's because the settings are adjustable by the user.

### ● Dot Clock Adjustment Mode

#### [Operations]

- [Dot Clock adjustment mode] starting procedure  
Reset start while pressing the [MAP] and [P. ADJ] Keys together.
- [Dot Clock adjustment mode] cancellation Monitor's microcomputer OFF.
- The operation after this should use Navigation's remote controller.
- [↑↓] button : Used to select a desired adjustment item in each mode.
- [←→] button : Used to adjust the selected item.

#### [EEPROM : S-29221BROI-J8T1]

The setting values are written in the EEPROM and then the read-out data is displayed on the screen.  
WRITE and READ operations are processed by the block data of 16 bits.

#### [Display]

In the following figures,a large square are for OSD examples.

#### Dot Clock adjustment mode

Adjustment item	Adjustment range	Adjustable name	Settings or written data (DEC)		
Clock phase adjustment	[0 - 15]	DOT CLK	15		
Clock phase adjustment (initial)	[0 - 15]	[FACTORY	8	]	
Common reverse output center	[0-255]	COM DC	255		
Common reverse output center adjustment (initial)	[0-255]	[FACTORY	140	]	

\* CS(Check Sum)display is not performed.

## 6.7 TEST MODE

### ● NAVIGATION TEST MODE

#### 1. How to start the test mode

1. When +Battery and ACC are ON, push RESET and EJECT buttons simultaneously.
2. Release RESET button only.
3. When "password entry screen" is displayed, release EJECT button.
4. Enter the password.
5. When the password has been entered, press [ENTER] key.
6. If the correct password has been entered, the test mode menu will be displayed.

\* The password entry screen, as the one used in the previous model, is no longer displayed.

<< Password for the service >>

The password is [↑(up)] → [↑(up)] → [↓(down)] → [↓(down)] → [ENTER].

If 8 digits or more are entered and [ENTER] key is pressed, it will be treated as a password error.

#### • Password entry screen

Please push the [RESET] button.

• Password OK : After 2 seconds or so, the screen will automatically move on to the menu screen.

<Attention> This is a special service application

Not for customer use.

Please input the whole password, then push the [OK] button.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

--	--	--	--	--	--	--	--

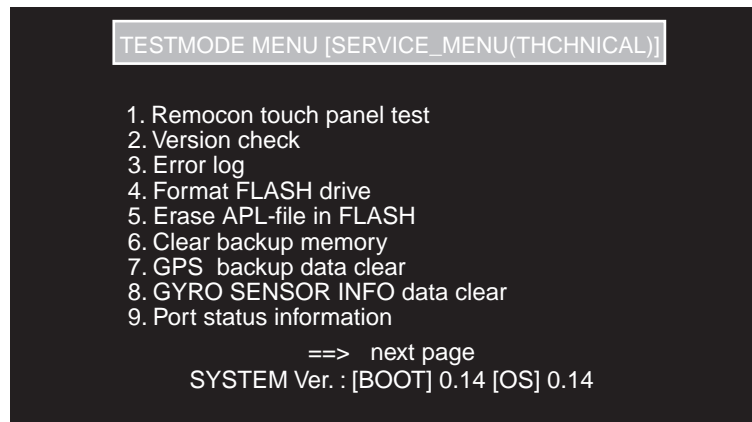
Password Right.

Go to next page.

• Password NG : Nothing will be displayed, and reboot action will be taken.



## 2. Test mode menu



No.	Inspection item	Outline of inspection	Content if inspection
1	Remocon touch panel test	Remote controller touch panel inspection	Calibration setting and remote controller inspection are performed.
2	Version check	Version information check	Display of various version information. (system software, GPS, system microprocessor, microprocessor for mechanism control, microprocessor for timer). The screen will return to "menu" by BACK key.
3	ERROR log	Error history entry	History of system software errors stored in SRAM is displayed. Maximum 8 events from the error last occurred can be displayed. The screen will return to "menu" by BACK key.
4	Format FLASH drive	FLASH format	FLASH domain used by the system soft is initialized. When the job is done, the screen will return to "menu".
5	Erase APL-file in FLASH	Application file inside FLASH is clear	Application file inside FLASH is clear. *(Except voice data and SRAM backup variable) When the job is done, the screen will return to "menu".
6	Clear backup memory	Back up variables initialization	SRAM domain used by the system software is initialized. When the job is done, reboot action will be taken.
7	GPS backup data clear	GPS back up data clear	SRAM domain used by GPS is initialized. When the job is done, the screen will return to "menu".
8	GYRO SENSOR INFO data clear	Learned data inside gyro sensor is clear	Learned data inside gyro sensor is cleared. When the job is done, the screen will return to "menu".
9	Port status information	Port status display	Port status is displayed. (reverse, parking, pulse, SDRAM capacity.)

# TESTMODE MENU [SERVICE\_MENU(THCHNICAL)]

1. Change to display error [Message]
2. Start within debug shell [On]
3. Program loading [Disc & Card]
4. GPS assessment
5. File maintenance
6. Program forced write

<== back page      ==> next page  
SYSTEM Ver. : [BOOT] 0.14 [OS] 0.14

No.	Inspection item	Outline of inspection	Content if inspection		
1	Change to display error	Switching of error information display	Display setting for error cases. (for debugging) Message/Information (error information) selectable.		
2	Start within debug shell	Switching of debug shell start	Setting for debug shell start. (for debugging) Off (no initial start)/On (initial start) selectable.		
3	Program loading	Switching of program loading	Recognition method for boot up program write is changed.		
			Disc (default)	System program	Write when the version No. in the disc is higher.
				System data	Write when the version No. in the disc is higher.
				GPS program	Write when the version No. in the disc is higher.
				Application program	Write when the version information is different from the one in disc.
			Disc & Card (for debug)	System program	Write when the version No. in disc or card is higher.
				System data	Write when the version No. in disc or card is higher.
				GPS program	Write when the version No. in disc or card is higher.
				Application program	Write when the version No. in disc or card is higher.
4	GPS assessment	GPS assessment system start	GPS assessment system can be used. The system will return to "menu" by BACK key.		
5	File maintenance	File maintenance function	File maintenance operations are made. Formatting of SRAM drive and PC card (ATA Flash Card) are made. SRAM data is retrieved and copied to PC card. Data retrieved from SRAM is copied to SRAM from PC card.		
6	Program forced write	Program forced write	Rewriting of SYS (system), GPS (GPS) and APL (application) software are done by force. (Joystick is used) The system will return to "menu" by BACK key.		

# TESTMODE MENU [SERVICE\_MENU(THCHNICAL)]

1. SRAM / SDRAM test
2. SENSOR test
3. RGB test
4. MS3 check

<== back page      ==> next page  
SYSTEM Ver. : [BOOT] 0.14 [OS] 0.14

No.	Inspection item	Outline of inspection	Content if inspection
1	SRAM/SDRAM test	Memory inspection	<p>SRAM : Device inspection and bus inspection are performed against all SRAM domains. Data will be protected. (applicable to both 32M and 64M)</p> <p>SDRAM : Device inspection and bus inspection are performed against all SDRAM domains. Data will be protected for both BIOS domain and USER domain. The function for SDRAM all domain inspection will activate by the built-in instruction RAM.</p>
2	SENSOR test	Sensor inspection	<p>G sensor, gyro, power supply voltage and installation condition are displayed.</p> <p>The system will return to "menu" by BACK key.</p>
3	RGB test	Image RGB inspection	<p>RGB inspection (Upper half, 8 colors. Black/blue/red/pink/green/light blue/yellow/white display. Lower half, 3 colors. Red/green/blue.) → red (FULL)→ green (FULL)→ blue (FULL)→ Switching can be made by [←] and [→] keys. The system will return to "menu" by BACK key.</p>
4	MS3 check	MS3 check [ROM]	MS3 mechanism test mode inspection.

## 3. How to select test mode menu

Select a desired menu by [↑] and [↓] keys, and execute by pressing [ENTER] key.  
Pages can be changed by [←] and [→] keys.

## 4. Version information

Version No. for BOOT section = X.XX    System software does not exist in SDRAM.  
Version No. for BOOT section = X.XX    Version No. for SDRAM = Y.YY

## ● Remocon touch panel test

- How to operate the touch panel test mode is described below.
- First, "1. Setup touch-panel effective range" in the touch panel test menu is made.
- Next, "3. Test Touch-panel", and if the result is OK, then EXIT the screen.
- If the result is NG, conduct "2. Setup calibration", and conduct "3. Test Touch-panel" once again. If the result is OK, then EXIT the screen.
- Furthermore, details of the misalignment can be verified by the "5. Check Touch-panel compensation".

\*) When inspecting the touch panel, use something thin with a round tip such as the touch pen. Furthermore, do not apply excessive force to the touch panel.

### Main Menu

```

###  Remocon / Touch-panel Test  ###

* 1. Setup touch-panel effective range
   2. Setup calibration
   3. Test Touch-panel
   4. Check now calibration condition
   5. Check Touch-panel compensation
   6. Check Touch-panel graphics
   7. Check Touch-panel navi coordinate

[CR]           Menu selection
[JS UP / DOWN] Cursor movement
[BACK]         Back to menu
  
```

"\*" mark shown on the left side of menu item "1" indicates that the setting has been completed. The setting items where "\*" is actually indicated will be "1. Setup ~" and "2. Setup ~" only.

[CR]            Enter  
 [UP/DOWN]    Selection of the inspection item  
 [BACK]        Return (to the test mode menu)

### 1. Setup touch-panel effective range

```

###  Setup touch-panel effective range  ###
The present of the touch-panel effect range (before. after)

min X : ( 37, 36)
max X : (230, 232)
min Y : ( 36, 36)
max Y : (210, 211)

<Caution>
Please trace a white line.
Please move to calibration setup after this setup.
  
```

### Adjustment steps

- 1) Trace the edge of the screen along the monitor resin frame with a round-headed thing to obtain the coordinates.
- 2) Press the [BACK] key.

### Explanation of the displays

min\_x(A,B) : X coordinate of the touch panel • minimum value received  
 max\_x(A,B) : X coordinate of the touch panel • maximum value received  
 min\_y(A,B) : Y coordinate of the touch panel • minimum value received  
 max\_y(A,B) : Y coordinate of the touch panel • maximum value received

A = A coordinate which is already stored in the SRAM (If there is no previous data in the SRAM, "min=90, max=180" will be displayed).

B = An updated coordinate which is planned to be set in the SRAM this time (If there is no previous data in the SRAM, "min=90, max=180" will be displayed).

[BACK] : The preset effective range is registered, and the screen will return to the remote controller inspection menu. The data of the effective range will be recorded in the SRAM.

In case the compensation value is not preset in the SRAM, the following initial (default) value will be entered automatically at the time of navigation system boot up.

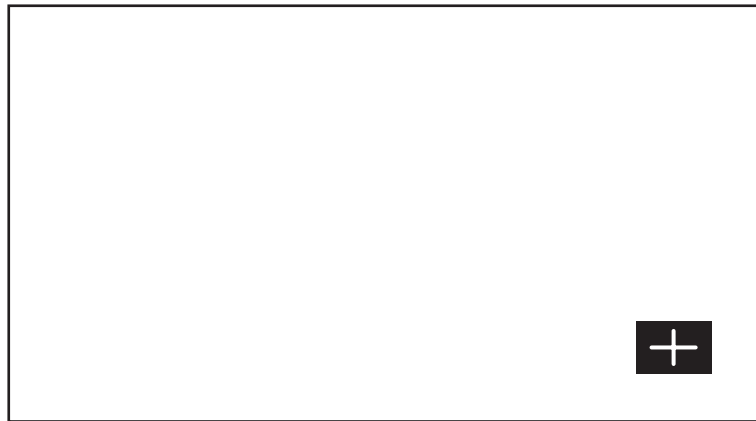
min\_x = 42 (right edge limit value)

max\_x = 246 (left edge limit value)

min\_y = 49 (bottom edge limit value)

max\_y = 238 (top edge limit value)

## 2. Setup calibration

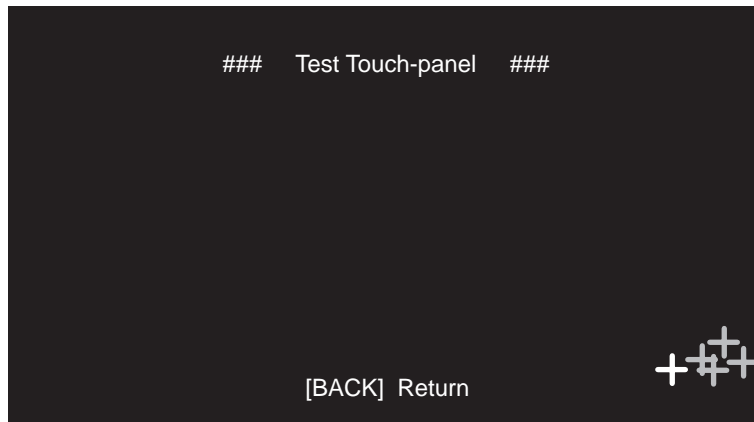


### Explanation

- A [+] cursor is displayed at 16 locations on the screen for calibration. Finally, verification of a single point is made. The cursor is always displayed at one location only, and moves on to the next location as the current one is correctly pressed.
- When pressing on the [+] cursor, make sure to press at the center of "+".
- The result of calibration will be recorded in the SRAM.
- If effective operation is not made for 30 seconds, the system will recognize as "erroneous end" and stops the calibration.

### 3. Test Touch-panel

A



B

Explanation on touch panel misalignment verification test.

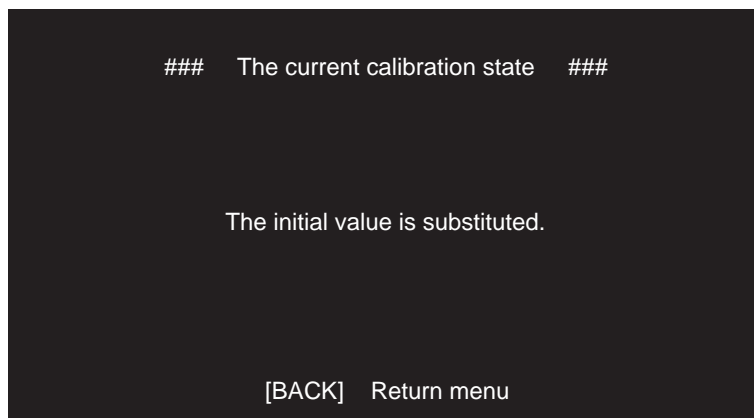
- 1) The test is intended to verify if the touched point on the touch panel is correctly recognized or not.  
 [+] cursor will be displayed at 16 locations on the screen.  
 The cursor will be displayed in "white color" only one at a time.  
 Each time the cursor is touched correctly, the next point will be displayed.  
 On the other hand, if it is recognized that the point touched was  $\pm 4$  dots vertically and  $\pm 5$  dots horizontally away from the center of the displayed [+] cursor, the erroneously recognized coordinate [+] will be drawn in "red color".
- 2) When touching the [+] cursor, touch the center of the + mark correctly.
- 3) If [BACK] is touched, the test will be finished, and the screen will return to the menu screen of the touch panel test mode.

C

If this test turns out to be NG, it will be necessary to redo "1. Setup touch-panel effective range" and "2. Setup calibration". Repeat the above steps once again.

### 4. Check now calibration condition

D



E

Explanation on the setting status of the calibration compensation value.

The current calibration compensation status is displayed.

The following data will be displayed.

"With no calibration value" (in white characters)

In case the compensation value does not exist in the SRAM.

"The effective range value is stored"

In case the compensation value for the upper limit and the lower limit are preset in the SRAM.

"The calibration compensation value is stored"

In case the calibration compensation values for the 16 points are preset in the SRAM.

"The effective range & calibration value is stored."

In case the upper limit and the lower limit values and the 16 points calibration values are preset in the SRAM.

"The initial value is substituted."

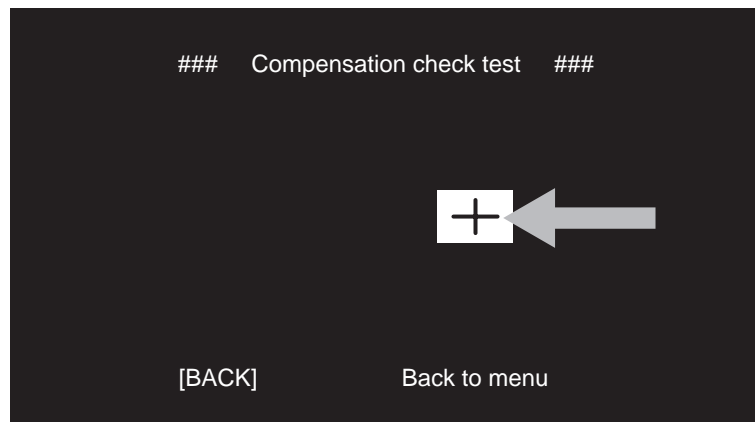
In case the value stored as the initial (default) value is preset in the SRAM.

F

"Error Condition"

In case the SRAM value is demolished or some unexpected situation is happening.

## 5. Check Touch-panel compensation



[BACK] : The system will return to the remote controller inspection menu.

### Explanation of the inspection details

- Regarding this inspection, the title only will be displayed at the initialized stage.
- As shown by the arrow, press any desired location on the monitor.
- A coordinate after the calibration correction will be displayed by the [+] mark against the coordinate recognized as pressed.

## 6. Check Touch-panel graphics

### Touch-panel coordinates test ###	
Cross drawing dot : ( 79, 80)	
From system CPU : ( 0, 0)	
Covernion effective : ( 0, 0)	
After calibration : ( 0, 0)	
[POSITION + ]	Display of the cood nates pushed
[BACK]	Return menu

[NAVI] + pressing the touch panel : The coordinate of the touch panel at that time will be displayed.

[↑] : Horizontal line will move upward.

[↓] : Horizontal line will move downward.

[←] : Vertical line will move to the left.

[→] : Vertical line will move to the right.

[BACK] : The system will return to the remote controller inspection menu.

### Explanation of the displayed coordinate (from top to bottom)

(79, 80) : Coordinate of the crossing point by the vertical and the horizontal lines (X direction, Y direction).

[(0~500, 0~240)]

(0, 0) : AD data value (X direction, Y direction) representing the coordinate of the pressed location received from the system control microprocessor.

(0, 0) : Coordinate (X direction, Y direction) obtained by normalizing the AD data value of the pressed location within the effective range.

(0, 0) : Coordinate (X direction, Y direction) obtained by adding the correction based on calibration to the normalized coordinate.

## 7. Check Touch-panel navi coordinate

A

```
###  Remocon test  ###
```

```
panel x_before = 35
```

```
panel y_before = 55
```

```
panel x_after  = 28
```

```
panel y_after  = 53
```

B

```
return to amenu by [DEST] and [TOUCH-PANEL]
```

[BACK] + pressing the touch panel will make the system return to the remote controller inspection menu.

Explanation of the displayed content.

panel x\_before : X coordinate normalized (expanded) within the effective range.

panel y\_before : Y coordinate normalized (expanded) within the effective range.

panel x\_after : X coordinate obtained by adding the correction based on calibration.

panel y\_after : Y coordinate obtained by adding the correction based on calibration.

C

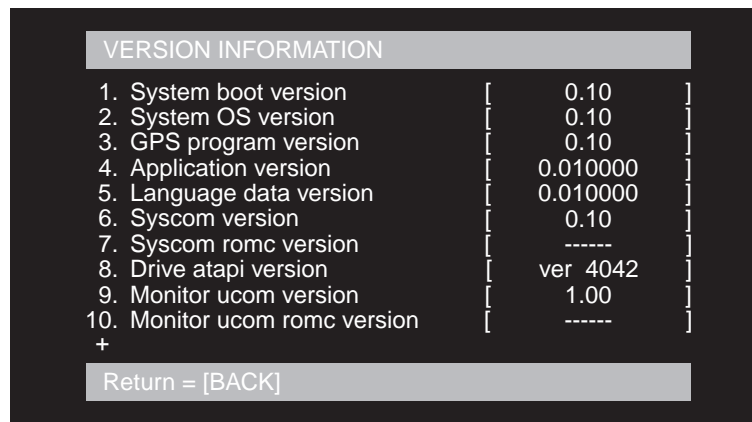
D

E

F



## ● Version check



	Item	Content	Information display	File name
1	System boot version	Version information of the system software BOOT section (FLASH) is displayed.	[**.**]*→Version information of the system software BOOT section.	UC050BOT.USA
2	System OS version	Version information of the system software OS section (FLASH) is displayed.	[**.**]*→Version information of the system software OS section. [NG]→System program does not exist.	UC050SYS.USA
3	GPS program version	Version information of the GPS program (DRAGON) is displayed.	[**.**]*→Version information of the GPS program. [NG]→GPS program does not exist.	UC050GPS.PRG
4	Application version	Version information of the application program (SDRAM) is displayed.	[**.**]*→Version information of the application program. [NG]→Application program does not exist.	EU050APL.PRG
5	Language data version	Version information of the language data (FLASH) is displayed.	[**.**]*→Version information of the language data. [NG]→language data does not exist.	UC050DAT.USA
6	Syscom version	Version information of the system microprocessor is displayed.	[**.**]*→Version information of the system microprocessor. [NG]→Communication with the system microprocessor has not been established.	
7	Syscom romc version	Version information of the system microprocessor ROM collection is displayed.	[**.**]*→Version information of the system microprocessor ROM collection. [-----]→No connection of ROM collection.	
8	Drive atapi version	Version information of the microprocessor of MS3 is displayed.	[**.**]*→Version information of the microprocessor of MS3. [NG]→Communication with the microprocessor of MS3 has not been established.	
9	Monitor ucom version	Version information of the microprocessor of monitor is displayed.	[**.**]*→Version information of the microprocessor of monitor. [NG]→Communication with the microprocessor of monitor has not been established.	
10	Monitor ucom romc version	Version information of the monitor microprocessor ROM collection is displayed.	[**.**]*→Version information of the monitor microprocessor ROM collection. [-----]→No connection of ROM collection.	
11	System language	Language of the system program (FLASH) is displayed.	[**.**]*→System program file. [NG]→System program does not exist.	UC050SYS.USA
12	Application language	Language data file is displayed.	[**.**]*→Language data file. [NG]→Language data does not exist.	UC050DAT.USA

## ● Error Information

### A 1. Error Information

Descriptions of error information, for errors arising from system software problems, will be provided in this section.

Up to eight sets of information, related to the system software's errors, will be stored in the SRAM.

By executing hi\_sysdwn( ) the line number (on which the error occurred), the error code and detailed information of the error, will be stored in the error log.

Hi\_sysdwn( ) will be executed in the following two circumstances:

1. hi\_sysdwn( ) will be intentionally stored if fatal errors occur with each BIOS.
2. If multiple exceptions, fatal exceptions, illegal command codes and trap command errors occur.

B

### 2. Error Log's Entry Function

Up to twenty-four sets of information, related to errors starting with the latest error, will be displayed by the error log entry function.

There are two types of error log displays.

The display will vary when the argument provided to hi\_sysdwn( ), depending on whether detailed information (such as program name, version number, creation date, creation time and creator name) exists or not.

1. When detailed information exists:

C

**\*\* ERROR INFORMATION \*\***

```
ERCD = 00000028(40)
FILE  = ini_usf.c
LINE  = 510(0000001fa)
VERS  = 1.1.1.1
DATE  = 2003/08/08
TIME  = 06:07:26
AUTH  = daisuke
```

ERROR-TIME ffff-ff-ff ff:ff:ff

No.4 ← ERROR No.3 → No.2  
Stop when push [BACK] button.

D

ERCD	Error code.
FILE	Error occurring program name.
LINE	Error occurring program line number.
VERS	Error occurring program version number.
DATE	Error occurring program creation date.
TIME	Error occurring program creation time.
AUTH	Error occurring program creator name.
ERROR-TIME	Error occurrence date and time.

E

F

## 2. When detailed information does not exist:

**\*\* ERROR INFORMATION \*\***

type = 000000b7(183)  
 ercd = ffffc002(-16382)  
 inf = ffb7ac18(-4740072)

ERROR-TIME ffff-ff-ff ff:ff:ff  
 No.2 ← ERROR No.1 → No.24  
 Stop when push [BACK] button.

type	Error occurring program line number.
ercd	Error code.
inf	System down information.
ERROR-TIME	Error occurrence date and time.

If an error occurs due to a multiple exception, the definitions will change to the following:

type	Execution address at the time of error occurrence.
ercd	Contributing factor for the exceptions.
inf	Program status word at the time of error occurrence.
ERROR-TIME	Error occurrence date and time.

## 3. Error Information Switch

The product (with default settings) will display error messages to the user if an error occurs.

Error information can be displayed if an error occurs by switching the error information in the test mode.

In either case, the error log entry display will be the same.

### 1) Error message display (default settings):

#### • Setting in the test mode:

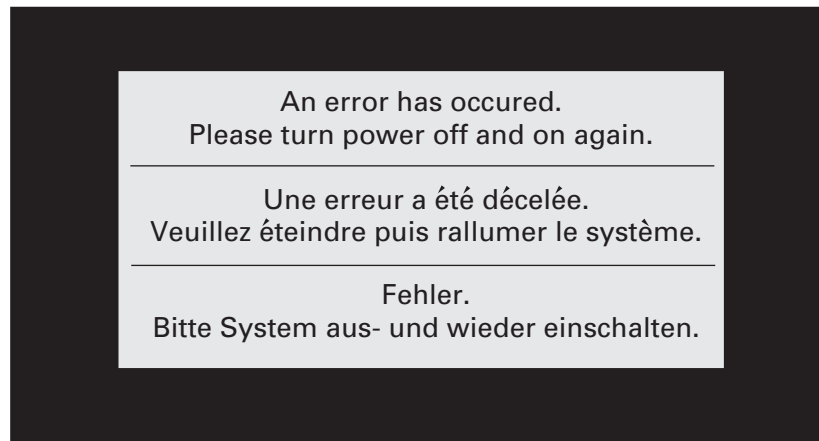
TESTMODE MENU [SERVICE\_MENU(TECHNICAL)]

1. Change to display error [Message]
2. Start within debug shell [On]
3. Program loading [Disc version]
4. GPS assessment
5. File maintenance
6. Program forced write

<== back page ==> next page  
 SYSTEM Ver. : [BOOT]0.65 [OS]0.65

- Display when an error occurs:

A

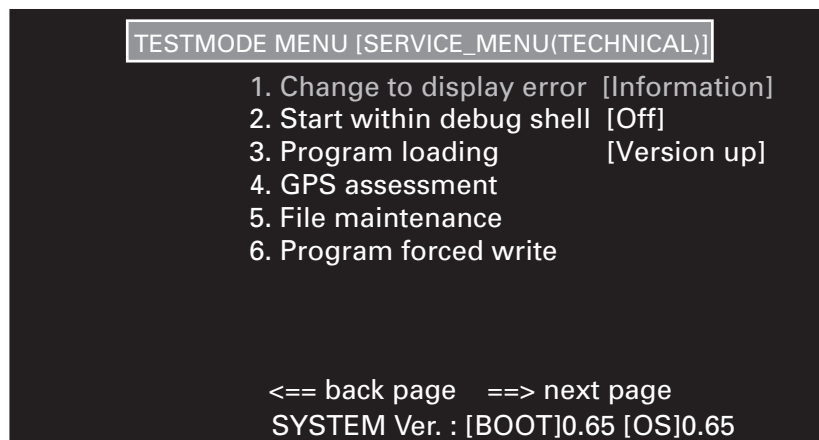


B

## 2) Error information display

- Settings in the test mode:

C

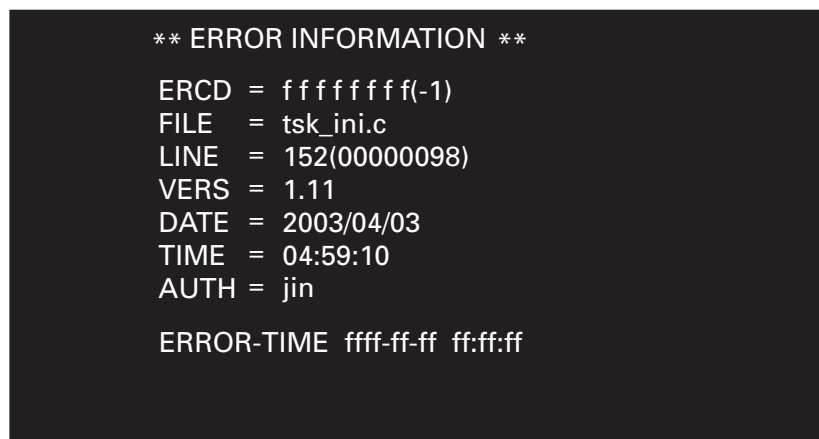


D

Display when an error occurs:

- If error information exists:

E



F

- If error information does not exist:

\*\* ERROR INFORMATION \*\*

type = 00000109(265)

ercd = 00000001(1)

inf = ffe83230(-1560016)

ERROR-TIME ffff-ff-ff ff:ff:ff

A

B

#### 4. Watch dog timer

This product has a built-in mechanism to monitor at a certain interval whether the software is correctly operating or not.

Once this mechanism becomes inoperable, "reset request" will be sent to the power supply microprocessor when a preset time (approximately 4 seconds) has elapsed.

In order to record operational situation of such an occasion, a special code which is not an error code is recorded in the ERCD.

C

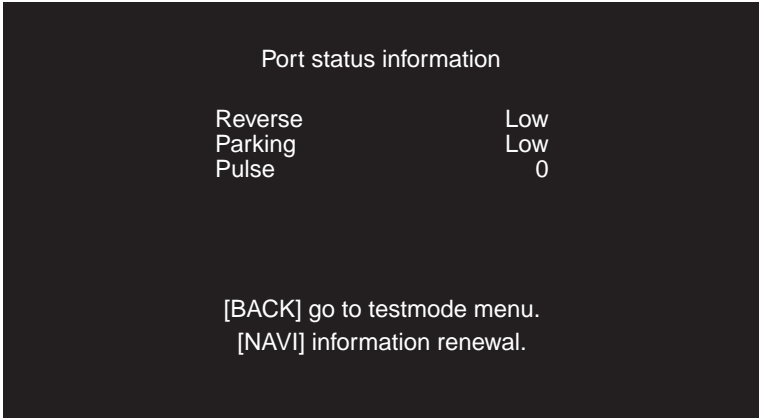
D

E

F

● Port status information

A



B

Display	Content of inspection
Reverse	Reverse port status
Parking	Parking port status
Pulse	Pulse status

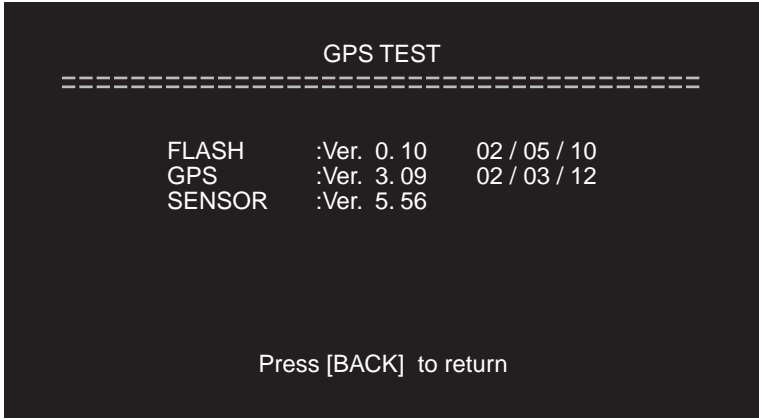
The pulse number of vehicle speed is indicated at 1/5 value of input frequency for vehicle speed signal. For example, when vehicle speed signal is 100Hz, the value becomes 20.

C

How to operate.  
[BACK] : Return to the test mode menu.  
[NAVI] : Update of the port status.

● GPS assessment

D

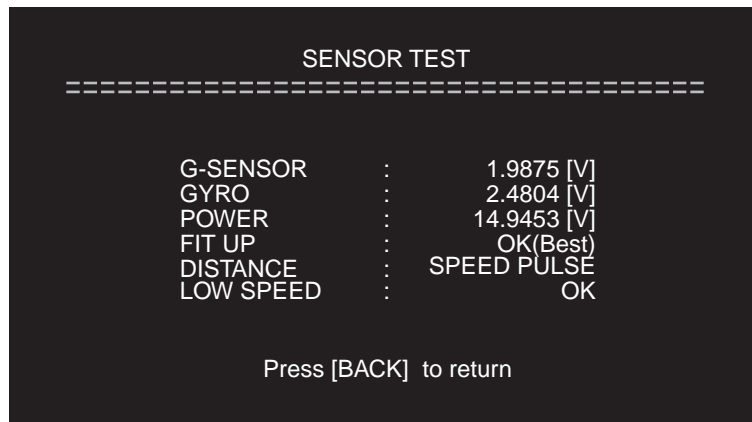


E

FLASH	Display of DRAGON FLASH ROM version information.
GPS	Display of GPS version information.
SENSOR	Display of sensor version information.

F

# ● SENSOR test



G-SENSOR	Display of G sensor voltage		
GYRO	Display of gyro voltage		
POWER	Display of power supply voltage		
FIT UP	Display of installation status		
	Display	Status	
	• NG	Installation position is NG.	
	• OK	Installation position is OK. (3rd best)	
	• OK (Better)	Installation position is OK. (2nd best)	
	• OK (Best)	Installation position is OK. (Best)	
DISTANCE	Display of distance calculation status.		
	Display	Status	
	• INITIALIZE	Sensor initial learning is under way.	
	• GPS	GPS distance. (Model without G sensor. No pulse connection.)	
	• G-SENSOR	G sensor distance. (simple hybrid.)	
	• ND-PG1	ND-PG1 distance.	
	• SPEED PULSE	Vehicle speed pulse distance.	
LOW SPEED	Display of minimum output speed of a low speed NG vehicle. (Depends on DISTANCE status.)		
	DISTANCE status	SPEED PULSE status	Display
	SPEED PULSE	Low vehicle speed pulse learning is under way.	CHECK
		Low vehicle speed pulse is OK.	OK
		Low vehicle speed is NG.	NG xx[km/h]
	Others		-----

## ● DVD Test Modes

### 1. Test mode starting procedure

Please select "MS3 check" to start test mode.

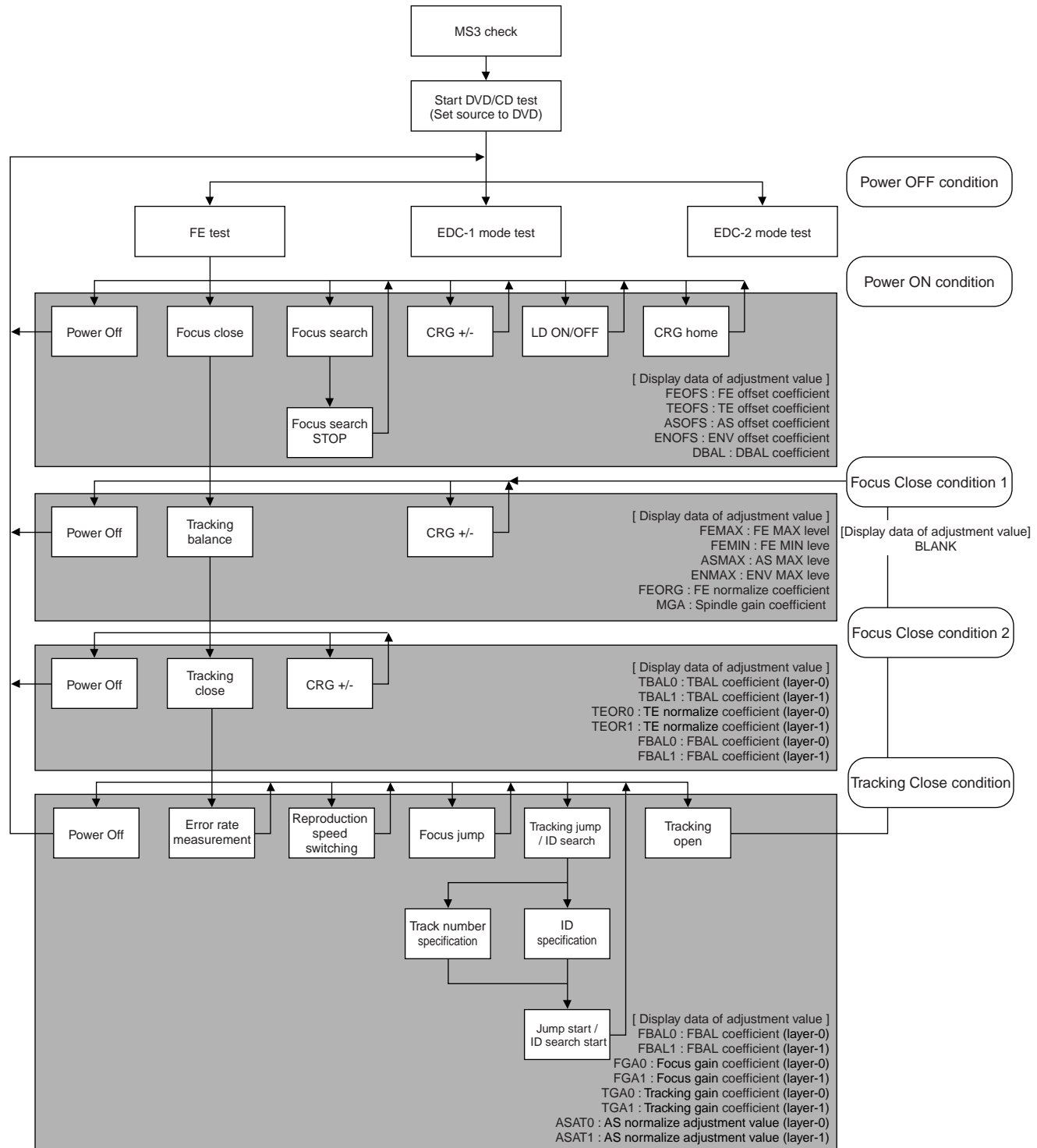
### 2. Keys used for the DVD test mode

[OK] : Selection decided.

[BACK] : Go back.

Directional keys : [↑ ↓ ← →] keys

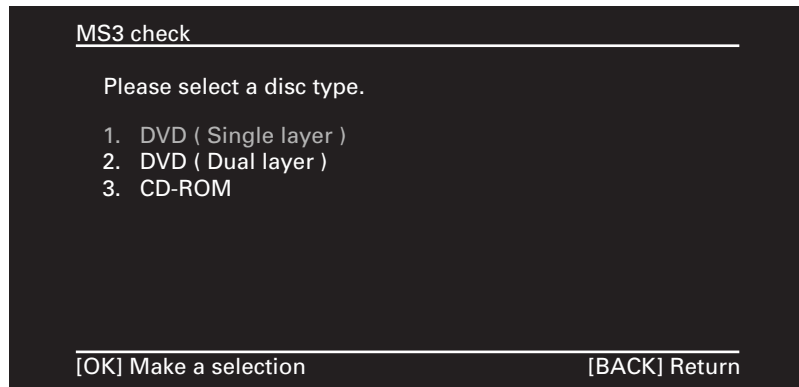
### 3. Test mode flow chart





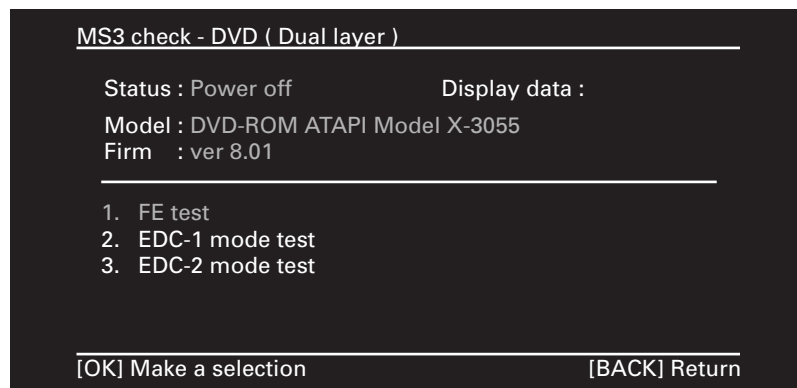
#### 4. Description of test mode

- [X-3055 Test Mode] : Initial screen



- [Direction + Enter]      [1] Starts DVD (single layer) test. (Use a single layer DVD disc.)  
                                  [2] Starts DVD (dual layer) test. (Use a dual layer DVD disc.)  
                                  [3] Starts CD test. (Use a CD disc.)
- [Return]                      Returns to the test mode menu

- [X-3055 Test menu] : Main menu screen

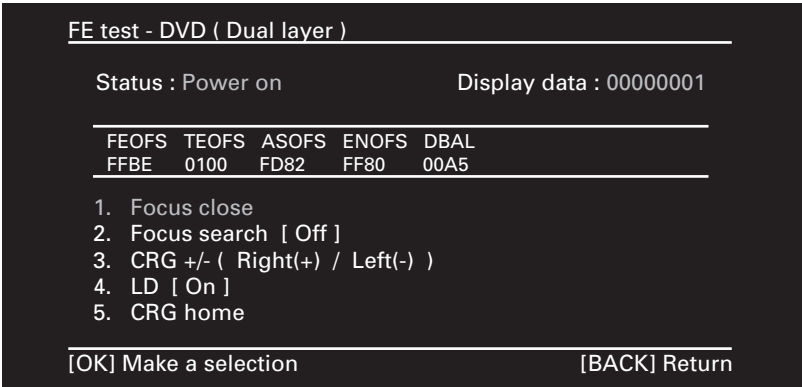


Status : "Power off" under normal condition.  
 Model : Model name of the drive being used.  
 Firm : Version number of the drive being used.

- [Direction + Enter]      [1] Starts FE test mode.  
                                  [2] Starts EDC-1 mode test.  
                                  [3] Starts EDC-2 mode test.
- [Return]                      Returns to the test mode menu.

• [FE Test menu] : FE test mode menu screen

A



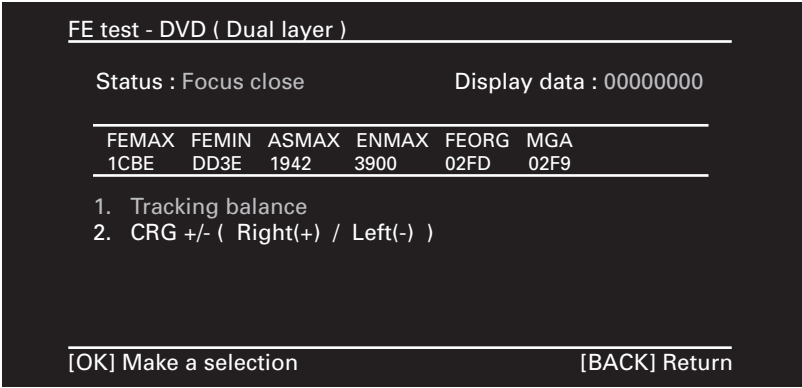
B

Status : "Power on" under normal condition.  
Display data : Displays an error code in case of an error.  
Adjusted value : See the Test Mode Flow Chart for the contents of adjusted values.

- [Direction + Enter]                      [1] Focus close (Turn the LD on before execution.)  
   [2] Focus search (Turn the LD on before execution.)  
   Toggle ON/OFF with [Enter] key.  
   [3] Carriage adjustment  
   The carriage moves outward with [→] key and moves inward with [←] key.  
   [4] LD switching  
   Toggle ON/OFF with [Enter] key.  
   [5] Moves the carriage to the home position.
- [Return]                                      Returns to the main menu.

• [FE Test 2] : FE test mode screen (focus close)

D

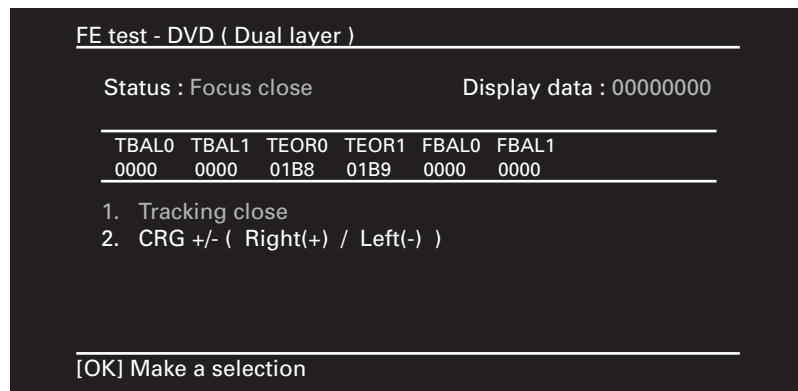


Status : "Focus close" under normal condition.  
Display data : Displays an error code in case of an error.  
Adjusted value : See the Test Mode Flow Chart for the contents of adjusted values.

- [Direction + Enter]                      [1] Tracking balance  
   [2] Carriage adjustment  
   The carriage moves outward with [→] key and moves inward with [←] key.
- [Return]                                      Returns to the main menu.

F

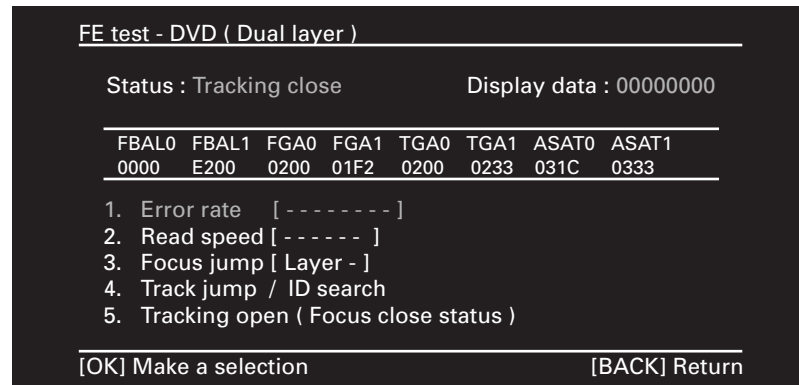
- [FE Test 3] : FE test mode screen (tracking balance)



Status : "Focus close" under normal condition.  
 Display data : Displays an error code in case of an error.  
 Adjusted value : See the Test Mode Flow Chart for the contents of adjusted values.

- [Direction + Enter] [1] Tracking close  
 [2] Carriage adjustment  
 The carriage moves outward with [→] key and moves inward with [←] key.
- [Return] Returns to the main menu.

- [FE Test 4] : FE test mode screen (tracking close)



Status : "Tracking close" under normal condition.  
 Display data : Displays an error code in case of an error.  
 Adjusted value : See the Test Mode Flow Chart for the contents of adjusted values.

- [Direction + Enter] [1] Error rate measurement  
 Displays the error rate by index (X.XXXE-X).  
 (Other operations cannot be executed during error rate measurement.)  
 [2] Playback-speed switching  
 Toggle (DVD x2.5CAV/ x1CLV, CD x10CAV/ x2CLV) with [Enter] key.  
 Display data : 00000000 = CAVx1  
 00000001 = CLVx1  
 00000002 = CAVx10  
 00000003 = CLVx2  
 [3] Focus jump  
 Toggle (Layer 0/1) with [Enter] key.  
 Display data : 00000000 = Layer 0  
 00000001 = Layer 1  
 [4] Track jump/ID search  
 Toggle ON/OFF with [Enter] key.  
 [5] Track opening  
 Clears the adjusted value display and moves to the focus close status.
- [Return] Returns to the main menu.

- [FE Test 5] : FE test mode screen (track jump/ID search)

A

FE test - DVD ( Dual layer )

Status : Tracking close

Display data : 00000001

FBAL0	FBAL1	FGA0	FGA1	TGA0	TGA1	ASAT0	ASAT1
0000	E200	0200	01F2	0200	0233	031C	0333

Layer : 0

ID : 030000

1. Track jump +

2. Track jump -

3. ID search

[OK] Make a selection

[BACK] Return

B

[Direction + Enter]

[1] Backward track jump

[2] Forward track jump

Select the number of tracks to be jumped with [Direction] key. Press [Enter] key to execute the jump.

[3] Searching the specified layer and ID

Select the layer and ID (address) to be searched with [Direction] key. Press [Enter] key to execute the search. Specify the address in "mmssff (minute: second: frame)" for CD-ROM.

[Return]

Returns to the tracking close status.

- [EDC-1/EDC-2 test menu] : EDC-1/EDC-2 Test Menu screen

C

EDC-1 mode test - DVD ( Dual layer )

Status : Normal mode

Display data : 200301C0

Please input start ID & layer.

Layer : 0

ID : 030000

[OK] Change ID

[BACK] Return

D

EDC-1 : Executes EDC test continuously.

EDC-2 : Executes EDC test by block unit.

Status : "Normal mode" under normal condition.

Adjusted value : See the Test Mode Flow Chart for the contents of adjusted values.

E

Layer : Layer being tested

ID : ID being tested

[Direction + Enter]

Select the layer and ID (address) of the jump destination with [Direction] key. Press [Enter] to execute the jump. Specify the address in "mmssff (minute: second: frame)" for CD-ROM.

[Return]

Returns to the main menu.

- [FE Test 5] : FE test mode screen (track jump/ID search)

F

- Display data (Error code)

E0000000 : Overrun error (Communication error)  
 E0010000 : Framing error (Communication error)  
 E0020000 : Writing, setting error (An error has occurred at the time of setting M62 CRAM, a command, etc.)  
 E0030000 : Parameter error (Set parameter is invalid.)  
 E0040000 : Command error (Set command is invalid.)  
 E0060000 : Command uncompleted  
 E0100000 : Decode normally completed (Decode has been normally completed from the specified ID to the final target ID in EDC mode.)  
 E0FFFF00 : Hard reset or soft reset

The followings are valid only during error rate measurement or in EDC mode

E0015300 : Media Load or Eject Failed (Mechanical error)  
 E0018000 : High Temperature (High temperature sense)  
 E0018100 : Voltage Out of Range (VD power supply failure)  
 E0023A00 : Medium Not Present (No disc)  
 E0030200 : No Seek Complete (Seek failure)  
 E0031100 : Unrecovered Read Error (Formatter Error, CRC (EDC) Error, Uncorrectable Error, etc.)  
 E0030900 : Track Following Error (Servo failure)

In case that the above error codes cannot be obtained, ATAPI BIOS error code will be displayed.

[ATAPI BIOS error code]

Error code name	Return value	Description
NO_ERROR	00000000H	Completed
ERR_ATAPI_RSV	ffff1000H	Reserved
ERR_ATAPI_DNR	ffff1001H	Device has not been prepared. Device has not completed TOC search, etc.
ERR_ATAPI_ANF	ffff1002H	The target address has not been found.
ERR_ATAPI_HEAT	ffff1003H	The device temperature is out of operational range.
ERR_ATAPI_MECHA	ffff1004H	Device cannot be operated because of any mechanical reason. Device has not been found on ATAPI bus.
ERR_ATAPI_NODISC	ffff1005H	Disc has not been found.
ERR_ATAPI_PARAM	ffff1006H	An error has been found in parameter or command.
ERR_ATAPI_REENT	ffff1007H	A reentrant prohibition violation has occurred.
ERR_ATAPI_DISC	ffff1008H	Disc error A command for data has been issued to an audio track. Access to an unreadable disc such as reversely inserted disc.
ERR_ATAPI_TMOUT	ffff1009H	Time out No response from device for a certain period of time.
ERR_ATAPI_DATA	ffff100aH	Error cannot have been corrected.
ERR_ATAPI_EJECT	ffff100bH	Disc has been ejected.
ERR_ATAPI_DCHG	ffff100cH	Disc change history exists. Disc change has been executed since the last command.
ERR_ATAPI_MODE	ffff100dH	X-3055 mode error A command for test mode has been issued in Normal mode, or other way round.
ERR_ATAPI_OFF	ffff100eH	ATAPI BIOS is OFF.
ERR_ATAPI_TEST	ffff100fH	An error has occurred with ATAPI_TEST command.

[ATAPI BIOS &lt;-&gt; MS3 error code association table]

ATAPI BIOS ERROR CODE	Sense Key	ASC	Comment
ERR_ATAPI_PARAM	0X05 Illegal Request	0X24	Inquiry, Mode Sense, Mode Select, Read DVD Structure
		0X1A	Mode Select
		0X26	Mode Select
		0X39	Mode Sense
		0X20	
	0X0B Aborted Command	0X4E	
ERR_ATAPI_ANF	0X05 Illegal Request	0X21	Seek, Read(12)
ERR_ATAPI_MECHA	0X01 Recovered Error	0X53	
	0X04 Hardware Error	0X85	
ERR_ATAPI_HEAT	0X01 Recovered Error	0X80	
ERR_ATAPI_NODISC	0X02 Not Ready	0X3A	
ERR_ATAPI_DNR	0X02 Not Ready	0X04	
	0X06 Unit attention	0X29	
ERR_ATAPI_DISC	0X02 Not Ready	0X30	
	0X03 Medium Error	0X02 0X09	
	0X05 Illegal Request	0X30 0X64	
ERR_ATAPI_DATA	0X03 Medium Error	0X11	
ERR_ATAPI_DCHG	0X06 Unit attention	0X28	

## 6.8 USING THE TEST DISC

TEST DISC Part No. : GGV1237

REMOTE CONTROLLER Part No.

Part No.	Description
CXB7427	Co-packed remote controller with AVIC-8DVD/EW
CXB7426	Co-packed remote controller with AVIC-9DVD/EW, UC
CXB9118	Co-packed remote controller with AVIC-8DVD-2/EW, -9DVD-2/EW, -90DVD/UC
CD-R11	Optional remote controller

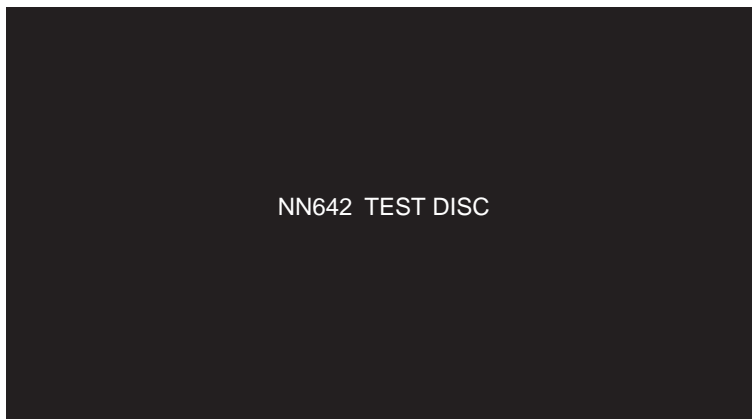
### 1. Start/End

#### 1-1. Start

When the test disc is inserted, the title "NN642 TEST DISC" will be displayed.

If [RETURN] key is pressed while the title is being displayed, the menu screen will be displayed. If no key is pressed, the first screen of the inspection screen for line will be displayed.

Title screen



#### 1-2. End

No action is taken.

### 2. Key operation

- In the case of inspection screen for line

1. The inspection screen and the menu screen can be switched alternately using the [CR] key on the remote controller.
2. The screen will go back to the previous screen by the [↑] key on the remote controller.
3. The screen will move forward to the next screen by the [↓] key on the remote controller.  
(Unless the inspection is finished, the screen will not move forward. The screen will not move forward, too, if there is an NG item.)

\* Refer to the explanation of each screen for the details.

- In the case of service menu screen

1. Select an inspection item by the [↑] and [↓] keys on the remote controller, and inspection screen will appear when the [CR] key is pressed.
2. When the [RETURN] key on the remote controller is pressed, the screen will go back to the menu screen.

\* Refer to the explanation of each screen for the details.

## Menu screens

A

--- Self Test Menu ---

1. External Connection
2. Data Communication (Short)
3. Data Communication (Open)
4. Natural Drawing & Rear View
5. VTR In check
6. GPS Self check
7. Software version display

[CR KEY] The selected menu is started.

B

--- Self Test Menu ---

8. Language Flag setup mode
9. Memory all cleay
10. GPS sensitivity measurement
11. Picture RGB check
12. GPS information
13. Sound play
14. File Maintenance mode

[CR KEY] The selected menu is started.

C

--- Self Test Menu ---

15. Picture check
16. Device check(Design engineer only)
17. Memory all clear (for Service)
18. BackUp Memory clear

[CR KEY] The selected menu is started.

D

E

F



### 3. Inspection screen

#### 1. Connection check

```

1. Connection check
Illumination signal          OFF
Parking brake signal         ON
Reverse gear signal          NOR
Car speed signal              0
Battery voltage               12.3V
Gyro voltage / sigma         2.450V OK / 1.1 OK
GSENS voltage / sigma        2.050V OK / 1.1 OK
Heading                      CONST
Pitch                       CONST
Remote controller             --
Body key                     MENU
K mode                       OFF
[joy stick down] It progresses to the next inspection.

```

- The status of the item indicated in the above figure will be updated every second.
- When the gyro is in operation, a BEEP sound will be made when the G sensor is activated.  
Right: 500Hz, Left: 700Hz. Up: 800Hz, Down: 600Hz
- Conditions for moving on to the next inspection
  - Illumination status is changing between ON and OFF.
  - Parking brake status is changing between ON and OFF.
  - Reverse status is changing between NOR and REV.
  - Pulse is changing to a value other than 0/0.
  - All keys on the main body as listed below have been pressed at least once.  
"DEST", "INFO", "MEMO", "TRAFFIC"
  - The value of the gyro changes to right and left at least once for each.
    - \* Until it changes at least once for each, "--" is displayed even when it is OK.
    - (ex.) When the orientation status is left rotation level 1, it is displayed as below.  
Heading      Left </ Right
    - (ex.) When the orientation status is uphill inclination level 1, it is displayed as below.  
Pitch          Upper +/ Lower
  - After the value of the gyro changes to right and left at least once for each, the dispersion of the gyro is OK for five consecutive seconds or longer.
    - \* "CHK" is displayed during continuous inspections.
- The voltage of the gyro, and the voltage and temperature of the temperature sensor are OK.
- K mode status is changing between ON and OFF.
  - \* K mode is for develop use. K mode status must be "OFF" for normal operation.

#### Standard value for other items

- GYRO voltage  
OK: 2.5±0.15    USABLE: 2.5±0.30
- GYRO variation  
OK: Less than 30
- G sensor voltage  
OK: 2.0±0.25    USABLE: 2.0±0.40
- G sensor variation  
OK: Less than 80
- Only when all the conditions are met, you can move on to the next inspection by the [↓] key on the remote controller. It should be noted, however, that you will not be able to move on to the next inspection if there is an error (background color is red) even if the conditions are met.

#### <Supplemental explanation regarding error display>

Displayed message	Details of the error
No connection to DRAGON	An error when communication with DRAGON cannot be established. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.
Command error	Time out error for response to BIOS call. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.
Unknown error	Error due to unknown reason.

## 2. Data Communication (Short Circuit) check (Not for service)

A

### 2. Data Communication (Short Circuit) check

Serial I/O #5(for Extension)	OK
Serial I/O #7(for Debug)	OK

[joy stick down] It progresses to the next inspection.

B

- SIO connection short is checked.
- Loop back check is performed on 5CH and 7CH.
- Wait screen is displayed until the checking is completed.
- When [RETURN] key on the remote controller is pressed while the inspection result is being displayed on the screen, inspection will be performed once again.
- Only in the case of OK, you can move on to the next inspection by the [↓] key on the remote controller.

## 3. Data Communication (Open Circuit) check (Not for service)

C

### 3. Data Communication (Open Circuit) check

Serial I/O #5(for Extension)	OK
Serial I/O #7(for Debug)	OK

[joy stick down] It progresses to the next inspection.

D

- SIO connection open is checked.
- Check is performed on 5CH and 7CH.
- Do not connect anything to the terminal. OK will be indicated under “open” condition.
- Wait screen is displayed until the checking is completed.
- When [RETURN] key on the remote controller is pressed while the inspection result is being displayed on the screen, inspection will be performed once again.
- Only in the case of OK, you can move on to the next inspection by the [↓] key on the remote controller.

E

F

#### 4. Natural Drawing & Rear View



- Natural image consisting of 256 colors will be drawn on the BG screen.
- ADPCM 1kHz sine wave at the sampling rate of 19kHz will be output for 30 seconds.
- Rear view image will be displayed on the right hand side of the screen.
- Volume level can be changed by the [←] and [→] keys on the remote controller. (0 to 9)  
[JPEG file name: ZHITO1.JPEG]  
[Voice file name: A19K01KS.WAV]
- You can move on to the next inspection by the [↓] key on the remote controller.

#### 5. VTR check

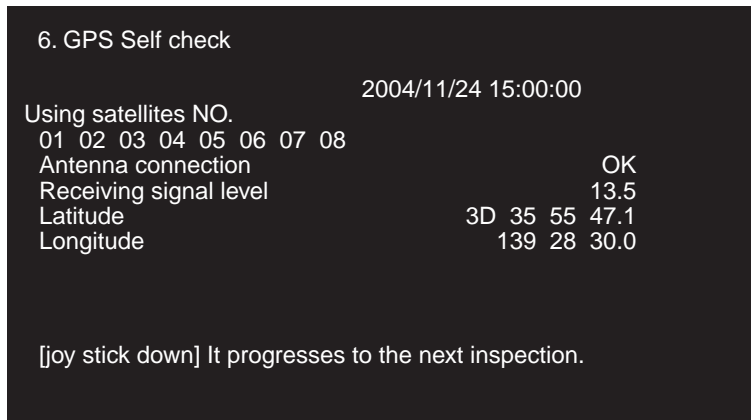
5. VTR check

[joy stick down] It progresses to the next inspection.

- External input image (VTR input image) is displayed and voice is outputted.
- You can move on to the next inspection by the [↓] key on the remote controller.

## 6. GPS Self check

A



B

- GPS receiving status will be displayed.
- Conditions to move on to the next inspection.
  - Antenna connection is OK.
  - Data is received from one or more satellite.
  - Time is being displayed.
- When all the conditions are met, the background color will change to blue.
- Only when all the conditions are met, you can move on to the next inspection by the [↓] key on the remote controller.

It should be noted, however, that you will not be able to move on to the next inspection if there is an error (background color is red) even if the conditions are met.

C

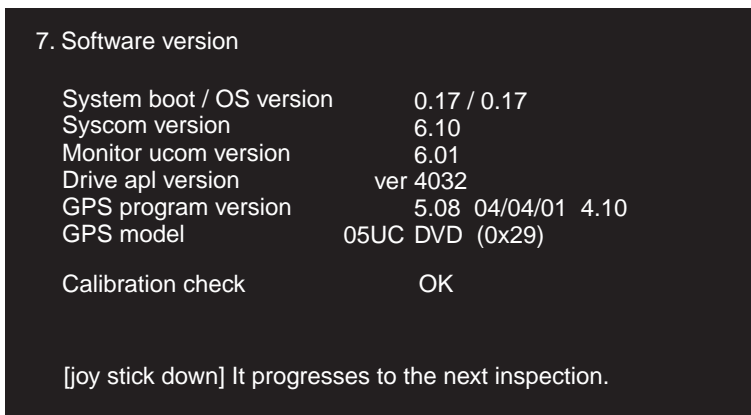
<Supplemental explanation regarding error display>

Displayed message	Details of the error
No connection to DRAGON	This is an error when communication with DRAGON is not established. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.
Command error	Time out error for response to BIOS call. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.
Invalid data	This is an error when request is made while the data for response is not prepared (not obtained from DRAGON). Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.

D

## 7. Software version

E



F

- It indicates the version information of the software.
- Conditions to move on to the next inspection.
  - "GPS model" is "05UC DVD".
  - "Calibration check" is "OK". OK : "Setup touch panel effective range" in Testmode is done.
- Only when all the conditions are met, you can move on to the next inspection by the [↓] key on the remote controller.

It should be noted, however, that you will not be able to move on to the next inspection if there is an error (background color is red) even if the conditions are met.

## 8. Language selection flag initialize

### 8. Language selection flag initialize

Language selection flag is initialize.

[joy stick down] It progresses to the next inspection.

- When the system enters into this inspection, language selection will be set to the original setting made at the time of shipment (i.e. no setting).
- \* The setting is made to display the screen for selecting the language to be used at the initial boot up after the shipment out of the factory.
- The setting is made when the system enters into this inspection.
- You can move on to the next inspection by the [↓] key on the remote controller.

## 9. All memory clear (Not for service)

### 9. All memory clear

The clearance of SRAM (application domain)  
The clearance of FLASH (application domain)  
Elimination of a sensor study value

[NAVI] Inspection is performed.

- SRAM (application domain) is cleared.
- FLASH (application domain) is cleared.
- Sensor learning level is cleared.
- If SRAM clear is not successful, FLASH will not be cleared.
- After the inspection screen is displayed, the above process is executed by the [NAVI] key on the remote controller.
- The result of the process is displayed.
- Only when everything is OK, you can move on to the next inspection by the [↓] key on the remote controller.

## 10. GPS sensitivity measurement

### 10. GPS sensitivity measurement

Satellite NO. 3 [← → to select satellite]

CH.	Look	SNR(AMU)	SNR(dB)
1	OK	12.3	23.4
2	OK	12.3	23.4
3	OK	12.3	23.4
4	OK	12.3	23.4
5	OK	12.3	23.4
6	OK	12.3	23.4
7	OK	12.3	23.4
8	OK	12.3	23.4
ALL	OK	Sensitivity: 20.4(db)	DoppRMS: 1.78(Hz)

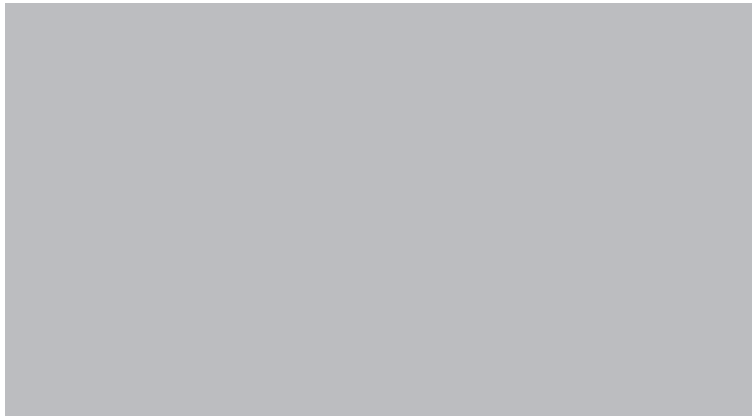
[joy stick down] Raw work inspection is ended.

- GPS can be changed by the [←] and [→] keys on the remote controller.
- Sensitivity of the selected GPS is displayed by the [RETURN] key on the remote controller.
- Production engineering inspection is ended and service menu is displayed by the [↓] key on the remote controller.

### <Supplemental explanation regarding error display>

Displayed message	Details of the error
No connection to DRAGON	This is an error when communication with DRAGON is not established. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.
Command error	Time out error for response to BIOS call. Communication error due to a hardware problem could be the cause. It is highly possible that the hardware on the DRAGON side is defective.

## 11. Picture RGB check



- RGB bridge is inspected.
- The screen can be switched by the [←] and [→] keys on the remote controller.
- RGB is drawn in the pattern of R 100% → R 50% → G 100% → G 50% → B 100% → B 50%.
- Total of 6 screens will be displayed.

## 12. GPS information

### 12. GPS information

```

0D T2 H25.5 V25.5 01/03/28 23:05:47
SV Azi Ev SNR Flag Acc Doppler SrchW
10 119 39 3.0 UY-- 3 -2249 2883
26 25 60 4.9 UYC- 2 -1051 3496
18 310 25 0.0 ---m f +0 12487
23 305 33 0.0 ---m f +0 21812
17 317 49 0.0 ---m f +0 21812
9 196 56 0.0 ---m f +0 21812
14 260 73 0.0 ---m f +0 5994
4 142 81 0.0 ---m 3 +0 5994

```

Position Sv Stat Ver & Diag Err Info

- "Position information" will be displayed when the cursor is at the "Position" position and the [CR] key is pressed on the remote controller.
- "Status information" will be displayed when the cursor is at the "Sv Stat" position and the [CR] key is pressed on the remote controller.
- "Diagnosis information" will be displayed when the cursor is at the "Ver&Diag" position and the [CR] key is pressed on the remote controller.
- "Error information" will be displayed when the cursor is at the "Err Info" position and the [CR] key is pressed on the remote controller.
- When an inspection is performed, "status information" (the screen shown above) will be displayed first.

## 13. Voice play back

### 13. Sound play

```

ADPCM fixation 11K 1K L
ADPCM fixation 11K 1K mono
ADPCM fixation 11K 1K R
ADPCM fixation 11K 1K ste
ADPCM fixation 19K 1K L
ADPCM fixation 19K 1K mono
ADPCM fixation 19K 1K R

```

Main fader Vol.[0-15] 6

[> Vol up, < Vol down]  
[return] It returns to a menu screen.

- Voice file (WAVE format) will be played back.
- The voice selected by the [CR] key on the remote controller will be played back.
- Volume level can be changed by the [←] and [→] keys on the remote controller.

## 14. File maintenance

A

### 14. File maintenance

Totale Capacity : 216.5K Remain : 216.3K  
 Media:SRAM: Path:  
 LOGINFO.CFG 20 84 02 / 08 / 07 17:35  
 LOCPOS .DAT 20 68 01 / 01 / 01 21:22

[1]Media [2]Copy [3>Delete [4]Dump [0]Help

B

- File can be copied, deleted or dumped.  
 Refer to HELP for “how to use” each function.

## 15. Picture check MENU

C

### 15. Picture check MENU

1/2

1. Plane
2. Color Bar
3. Cross Hatch
4. Sweep
5. Step
6. Ramp
7. Window
8. Mono Scope
9. Vertical Resolution Column

[Push OK to make a selection]  
 [return] It returns to a menu screen.

A pattern is selected by the [↑] and [↓] keys and an image is displayed by the [CR] key.

D

#### 1. Plain

...Display is made in the order of black, blue, red, pink, green, light blue, yellow and white by the [←] and [→] keys operation on the remote controller.

#### 2. Color bar

...White, yellow, light blue, green, pink, red, blue, black bars will be displayed from left to right.

#### 3. Cross hatch

#### 4. Sweep

#### 5. Step

#### 6. Lamp

#### 7. Window

#### 8. Mono scope

#### 9. Cycle line 1

E

#### 10. Cycle line 2

#### 11. Horizontal stripe 1

#### 12. Horizontal stripe 2

#### 13. Chinese character pattern

#### 14. Map (map.jpg)

#### 15. Natural image (nature.jpg)

#### 16. Portrait 1 (hito1.jpg)

#### 17. Portrait 2 (hito2.jpg)

F



## 16. Device Check

### 16. Device Check

1. SDRAM (0X48000000 - 0X4BFFFFFF)
2. SRAM (0X42000000 - 0X4203FFFF)
3. ASIC (0X43000270 - 0X43000274)
4. ALL Device

[return] It returns to a menu screen.

- The device inspection above is performed only for engineering.
- (Device selection)  
Select a device with the [↑] and [↓] keys on the main unit, and decide with the [CR] key.
- (Pattern selection)  
Select a pattern with the [↑] and [↓] keys on the main unit, and start the inspection with the [CR] key.  
\* Only when ASIC is selected, the bit shift pattern can be selected.  
Return to the device selection screen with the [RETURN] key on the main unit.
- (During the inspection)  
Stop the inspection with the [RETURN] key on the main unit, and return to the device selection screen.

## 17. All memory clear (for Service)

### 17. All memory clear (for Service)

The clearance of SRAM (application domain)  
The clearance of FLASH (application domain)

[NAVI] Inspection is performed.  
[return] It returns to a menu screen.

- SRAM (application domain) is cleared.
- FLASH (application domain) is cleared.
- If SRAM clear is not successful, FLASH will not be cleared.
- After the inspection screen is displayed, the above process is executed by the [NAVI] key on the remote controller.
- The result of the process is displayed.

## 18. Initialization of a backup variable

A

### 18. Initialization of a backup variable

A backup variable is initialized.

#### Cautions

System reset is carried out after initialization.

[NAVI] A backup variable is initialized.  
[return] It returns to a menu screen.

B

- Back up variables are initialized by the [NAVI] key on the remote controller for system reset.
- The screen will return to the menu screen by the [RETURN] key on the remote controller.

C

D

E

F

## 7. GENERAL INFORMATION

### 7.1 DIAGNOSIS

#### 7.1.1 DISASSEMBLY

##### ● Removing the Case (not shown)

1. Remove the two screws and then remove the Case.

---

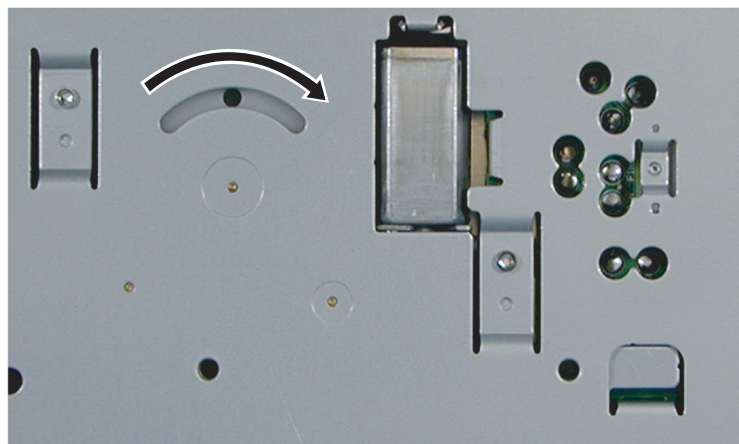
##### ● Preparation for Removing the Grille Assy

To remove the Grille Assy block, it must always be moved to the OPEN position.

1. Rotate the gear using a screwdriver, etc. ( $\phi 2.8$  or smaller) from the slit on the bottom surface of the main unit (Fig.1) in the direction of the arrow, and move the Grille Assy to OPEN position.

Note)

Though the gear is heavy, please turn carefully not to inflict too much force. Turning with excessive force may cause damage in the rack or gear in the driving section.



FRONT

Fig.1

## ● Removing the Monitor Assy

- A **1** Remove the two screws. (Fig.2)

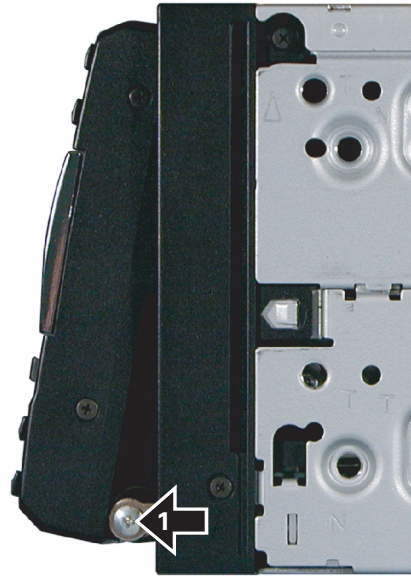


Fig.2

- (2) Remove the screw to remove the Cover.  
Do not pull the connecting flexible cable. (Fig.3)

- (3) Remove the flexible cable from the connector to remove the Monitor Assy. Push the lid of the connector up with the top of precision screwdriver (minus), and then remove the flexible cable. Take much care not to pull the connector forcibly or break it open because it is easy to be damaged. And also, use the precision screwdriver in the same way in the installation. (Fig.3)

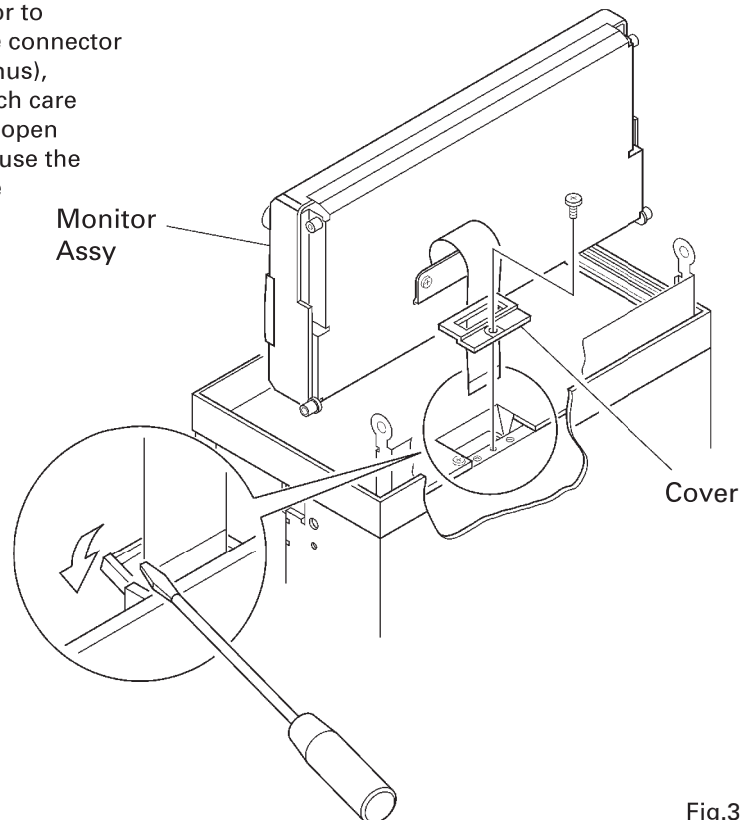


Fig.3

### ● Removing the Case Unit (Fig.4)

- 1** Remove the two screws and then remove the Guide.
- 2** Remove the four screws.
- 3** Remove the five screws and then remove the Case Unit.

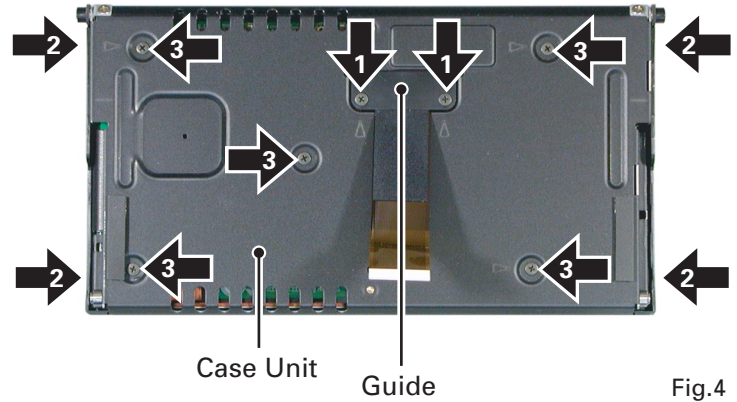
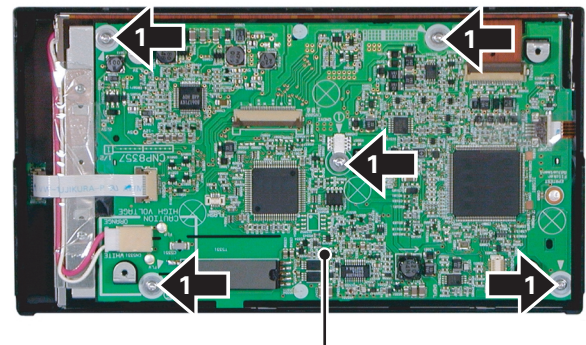


Fig.4

### ● Removing the Monitor PCB (Fig.5)

- 1** Remove the five screws.

Disconnect the connector and then remove the Monitor PCB.



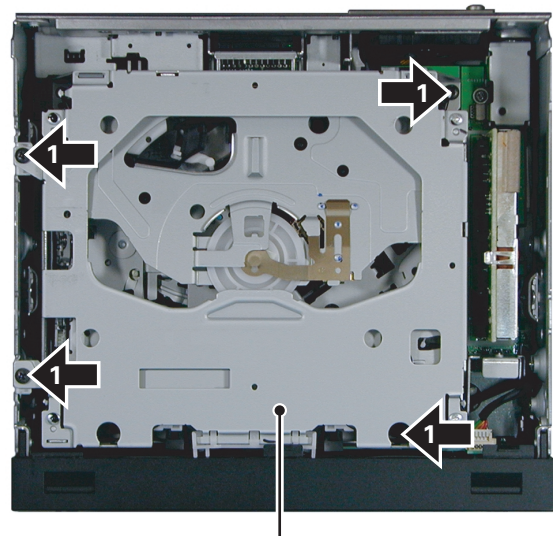
Monitor PCB

Fig.5

### ● Removing the CD Mechanism Module (Fig.6)

- 1** Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.



CD Mechanism Module

Fig.6



### ● Removing the Panel Unit (Fig.7)

A

**1** Remove the two screws.

**2** Remove the four screws.

Disconnect the connector and then remove the Panel Unit.

B

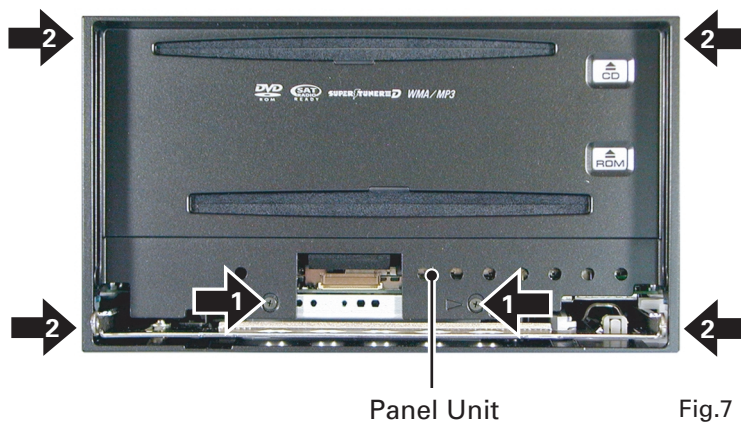


Fig.7

### ● Removing the Heat Sink (Fig.8)

C

**1** Remove the two screws.

**2** Remove the seven screws and then remove the Heat Sink.

C

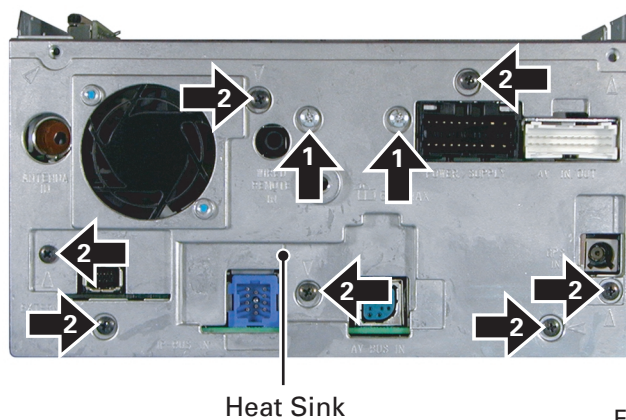


Fig.8

### ● Removing the System Unit (Fig.9)

D

**1** Remove the six screws.

Disconnect the connector and then remove the System Unit.

E

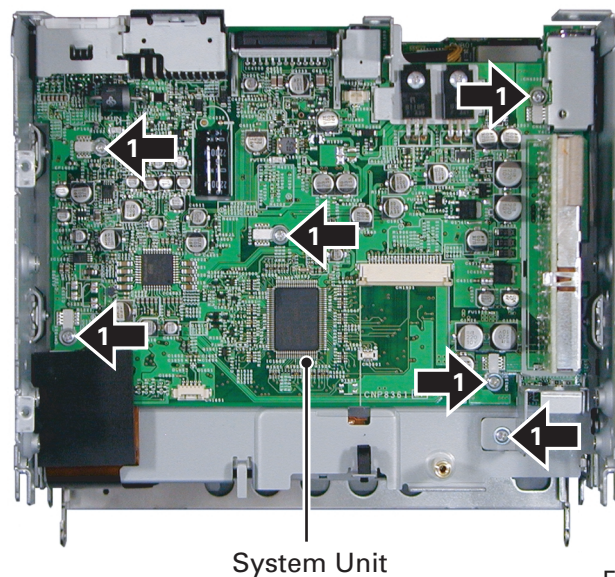


Fig.9

F

### ● Removing the Chassis Unit (Fig.10)

- ➡ 1 Remove the three screws and then remove the Chassis Unit.

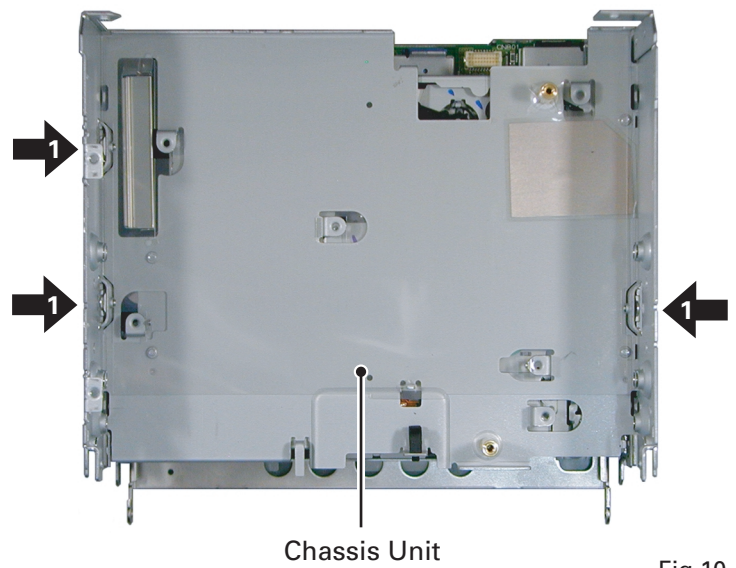


Fig.10

### ● Removing the DVD Mechanism Module (Fig.11)

- ➡ 1 Remove the four screws and then remove the DVD Mechanism Module.

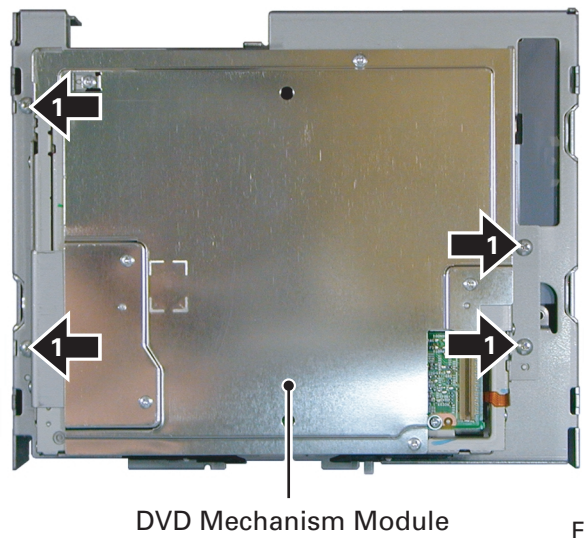


Fig.11

### ● Removing the CC Unit (Fig.12)

A

**1** Straighten the tab at location indicated.

**2** Remove the four screws.

Disconnect the connector and then remove the CC Unit.

B

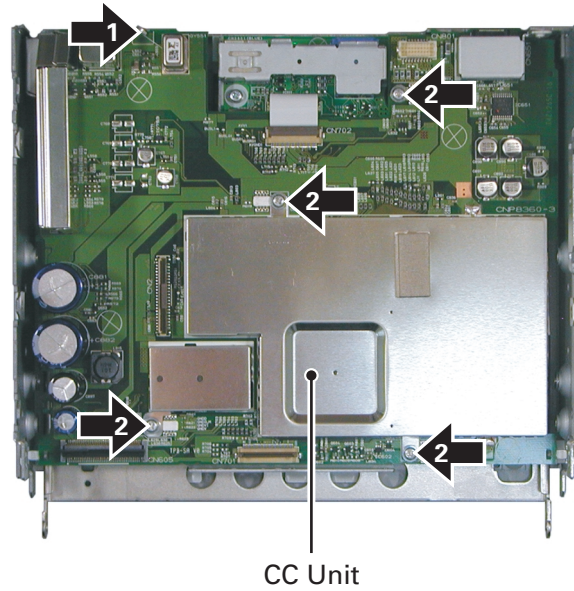


Fig.12

### ● Removing the Connector Unit (Fig.13)

C

**1** Remove the two screws.

Disconnect the connector and then remove the Connector Unit.

### ● Removing the Main PCB Unit (Fig.13)

**2** Straighten the two tabs at locations indicated.

D

**3** Remove the screw.

Disconnect the connector and then remove the Main PCB Unit.

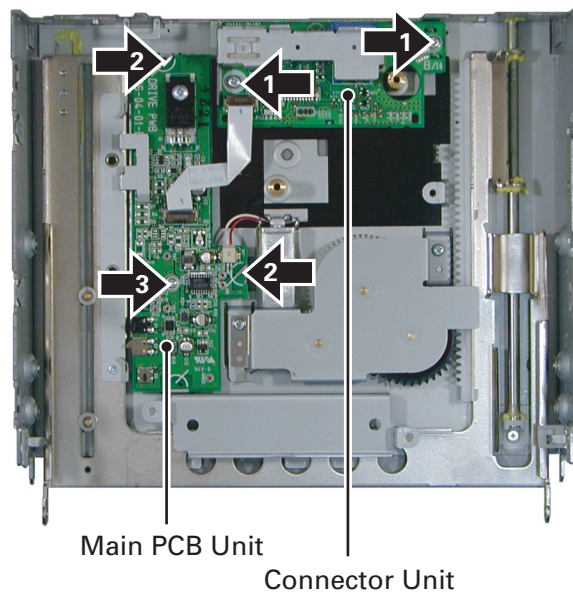


Fig.13

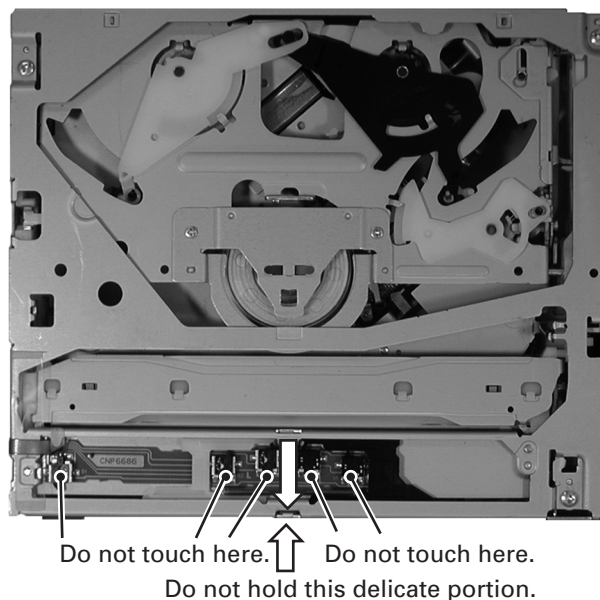
E

F



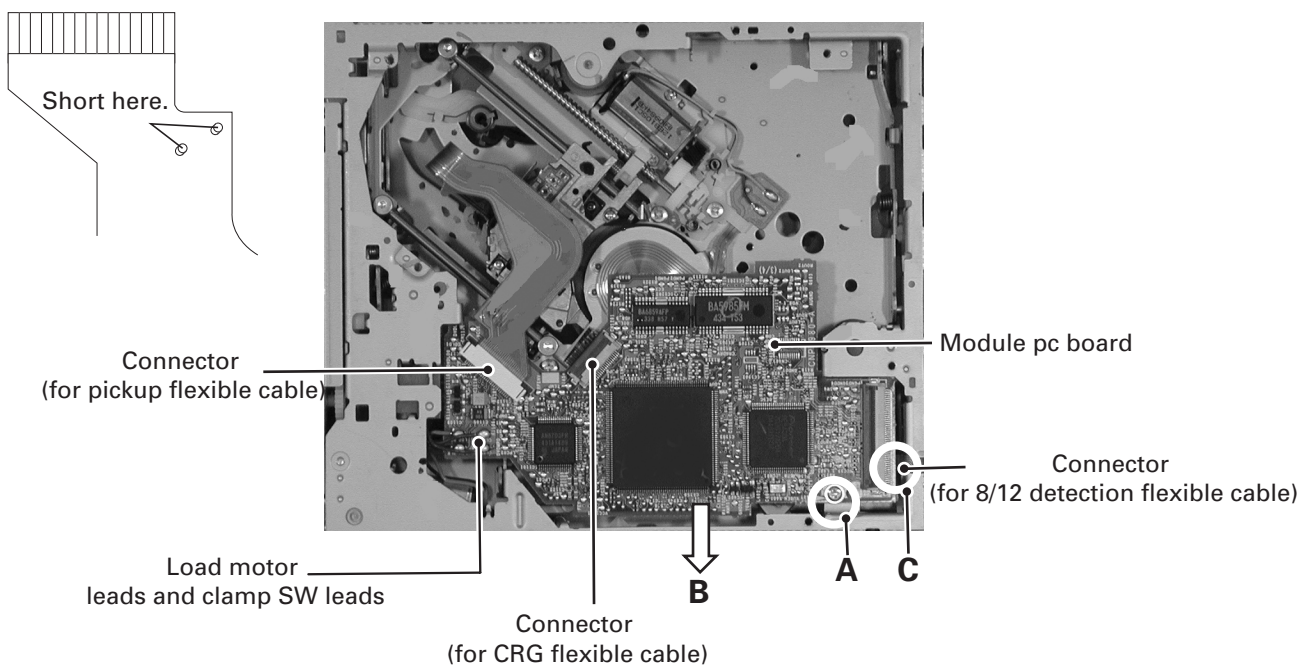
### ● Precautions on handling the mechanism module

1. Hold the upper and main frames.
2. Do not hold the front portion of the upper frame. It is a delicate part.
3. Do not touch the switches on the top panel.
4. Be careful not to catch the flexible cables.



### ● Removing the module pc board

1. Set the mechanism to the lock position (disc load standby position).
2. Place the mechanism module upside down.
3. Short the two lands on the pickup flexible cable as shown below.
4. Be sure to disconnect the pickup flexible cable and the CRG flexible cable from the connectors to protect them from damages.
5. Remove solder from the load motor leads and clamp SW leads.
6. Loosen the two fixing screws. Lift the position A of the module pc board lightly and move it in the direction B to remove it. Be careful not to damage the flexible cable C.
7. Disconnect the 8/12 detection flexible-cable from the connector.



## ● Removing the pickup unit

1. Remove the module pc board in accordance with the procedure of "Removing the module pc board."
2. While holding the pickup case, remove the skew screw (main).
3. Lifting the end of the pickup rack, slide the main shaft, and remove the pickup unit.

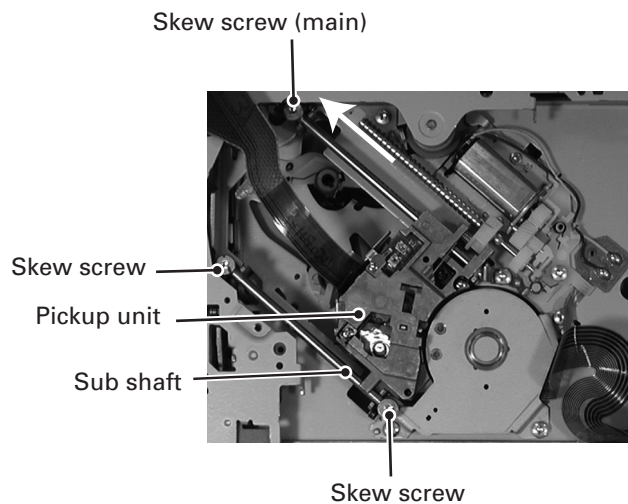
### Notes:

Replacing the pickup unit requires the skew adjustment.

Remove glue from both ends of the main and sub shafts, and skew stud.

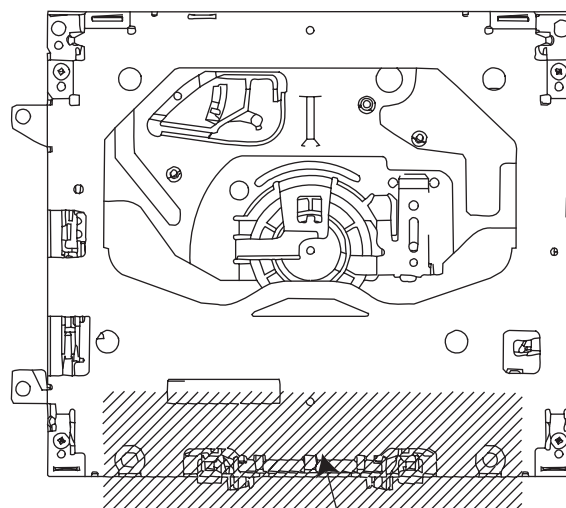
Do not reuse the old skew screw. Be sure to use a brand-new skew screw supplied with a new pickup unit.

Fix the skew screw with glue (GYL1001) after adjustment.



### ● How to hold the Mechanism Unit

1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.

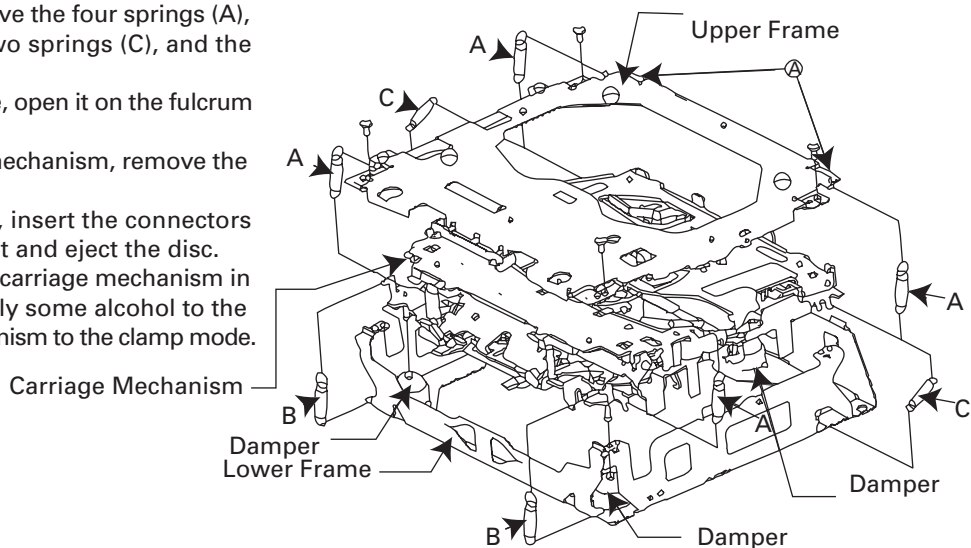


Do not squeeze.

### ● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

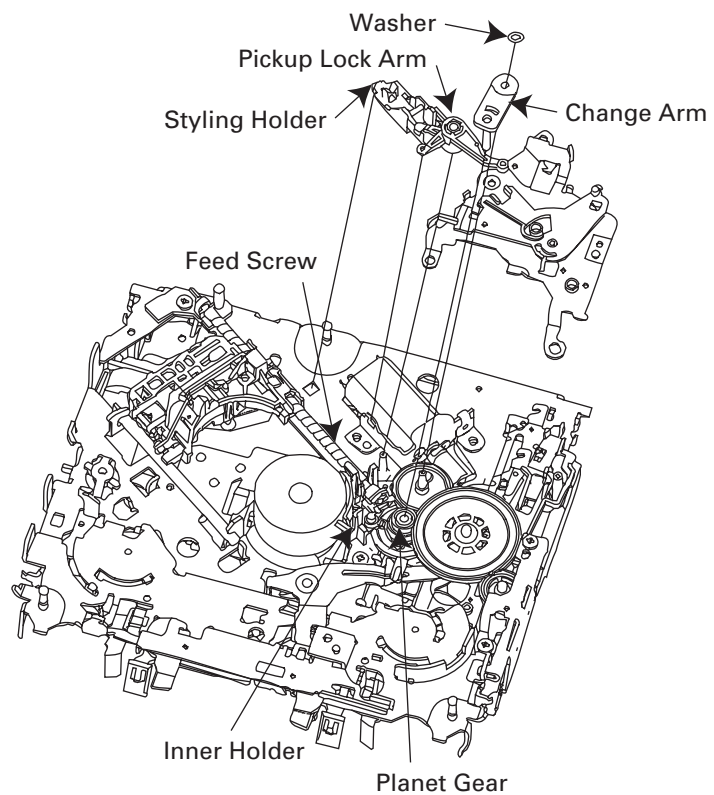
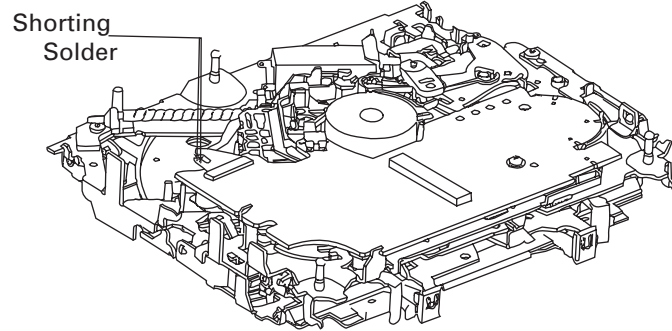
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.



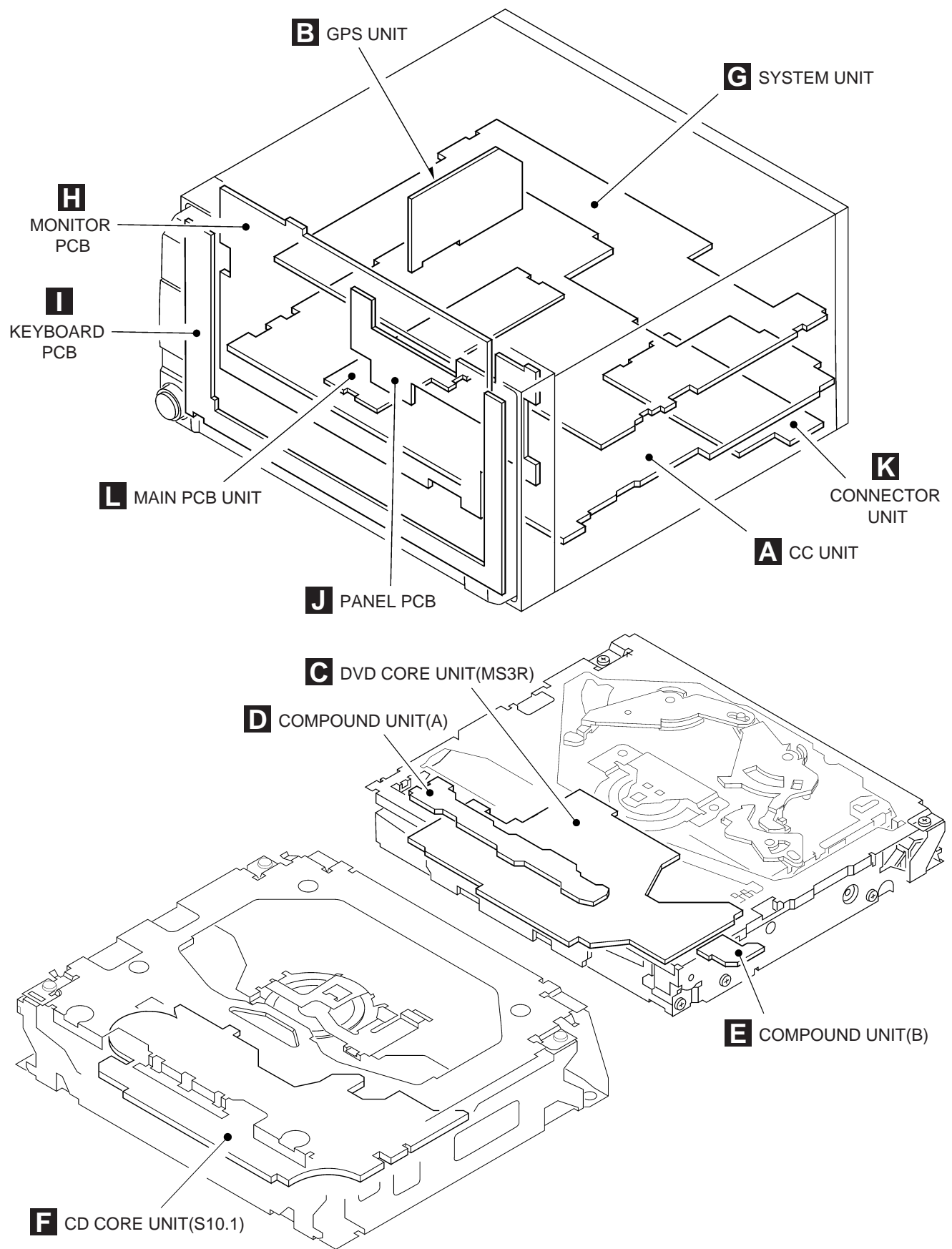
## ● Removing the Pickup Unit

1. Apply shorting solder to the Pickup flexible cable.  
Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

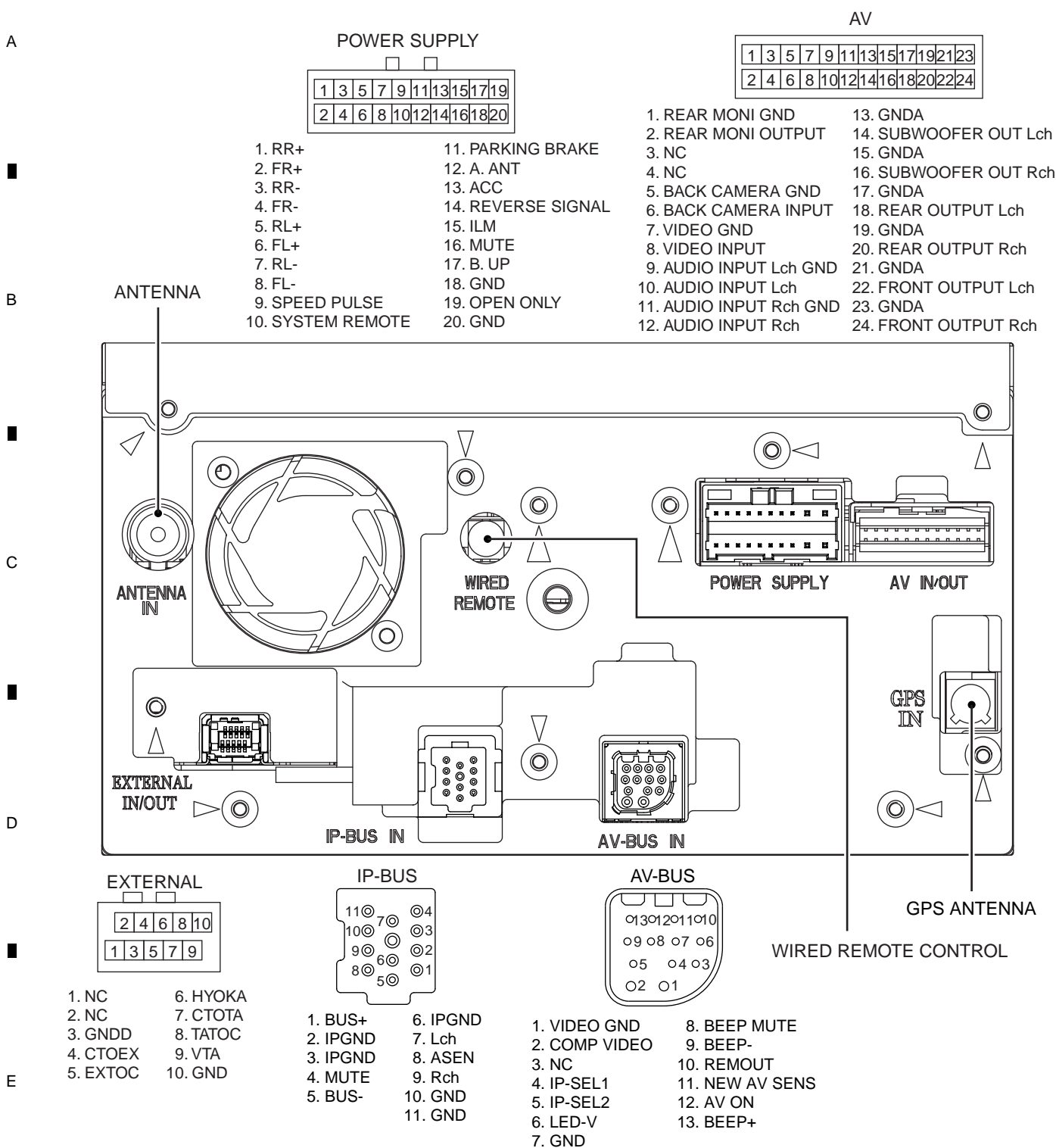
Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.



## 7.1.2 PCB LOCATIONS



## 7.1.3 CONNECTOR FUNCTION DESCRIPTION



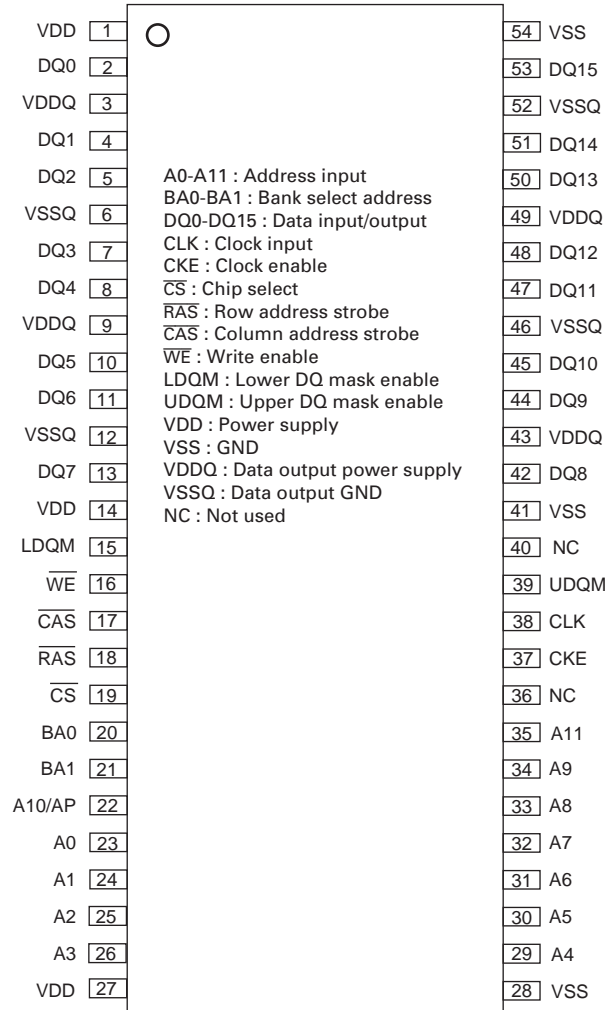
## 7.2 IC

K4S561632E-TL75  
HY57V561620CLT-H  
UPD705103GM-180S1  
TC74LCX08FTS1  
TC7SH04FUS1  
PD6336C  
PEH007A  
PEH008A  
TC74LCX245FTS1  
TC74LCX541FTS1  
TC7SH00FUS1  
TC7SH08FUS1  
UPD4721GSS1  
AK4351VT  
MB86291APFVS-G-DL  
TC7SH14FUS1

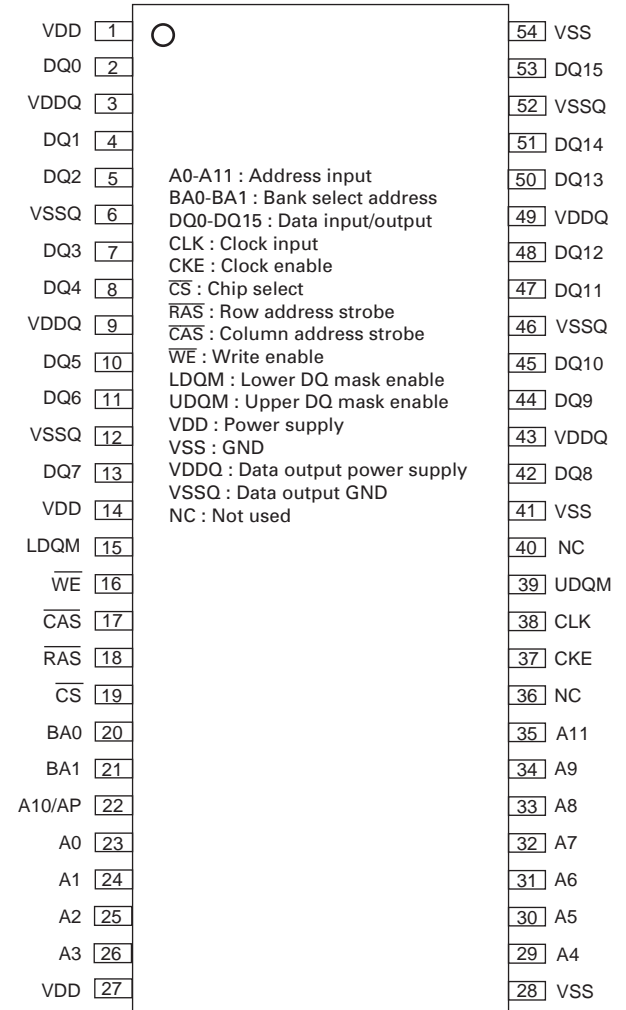
BH7236AF  
UPB1027GS  
PD3390A  
ADC12H034CIMSAS1  
PD6519A  
PE5479A  
OZ961ISN  
S-29221BR0I-J8T1  
TPS850  
BD6171KV  
PE5478A  
TC74VHCT08AFTS1  
NJM2561F1  
TA2050FS1  
BA5835FP  
NJM2885DL1-33

PE5454B  
UPD63763GJ  
PE5430A

\* K4S561632E-TL75



\* HY57V561620CLT-H



IC's marked by \* are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.



## \* UPD705103GM-180S1

A

B

C

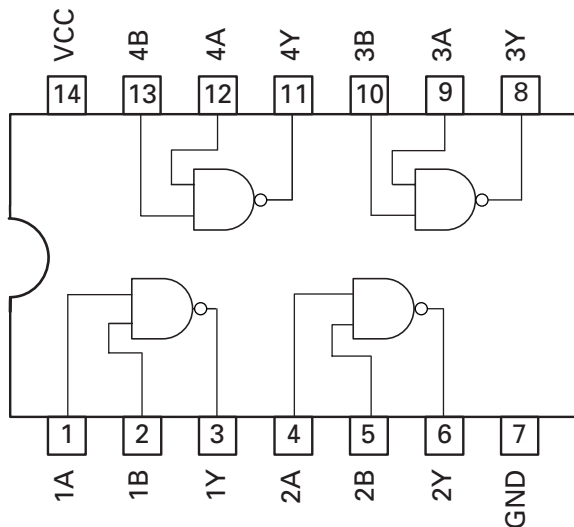


## \* TC74LCX08FTS1

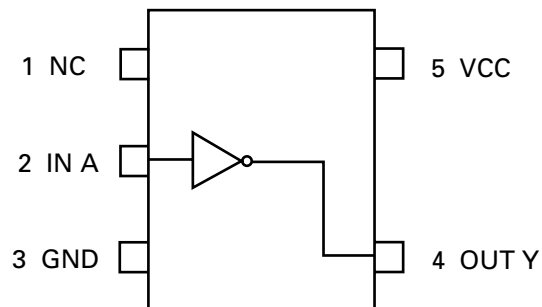
D

E

F



## \* TC7SH04FUS1



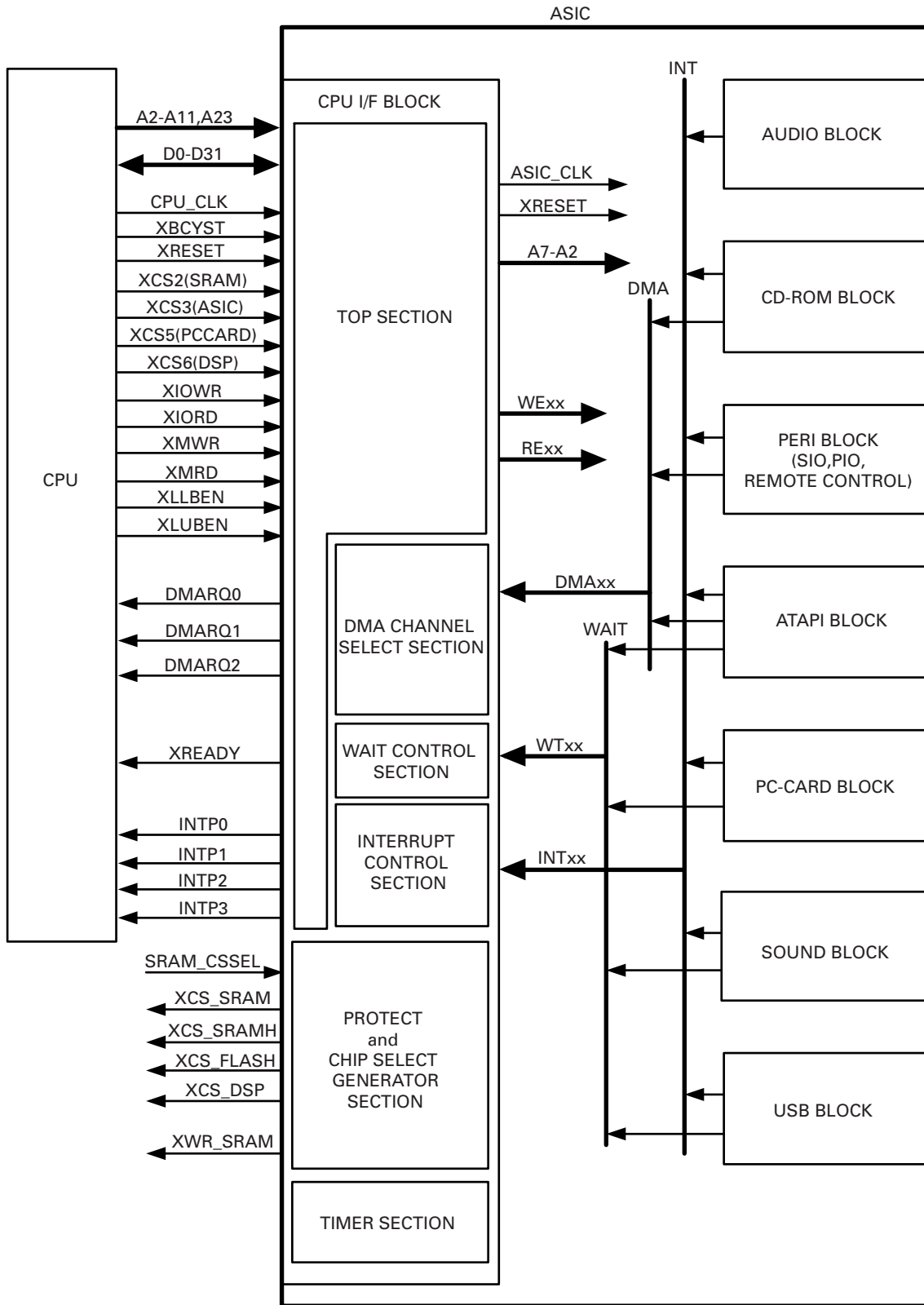


### ● Pin Arrangement Chart

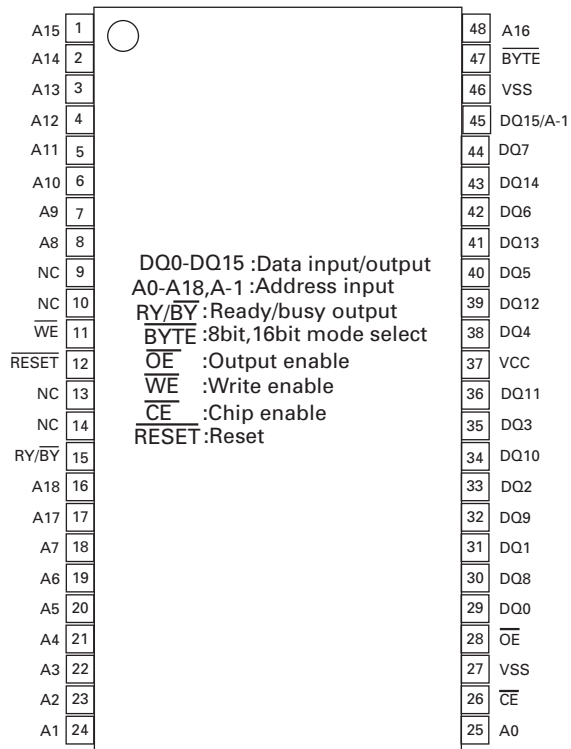
TOP VIEW

TOP VIEW

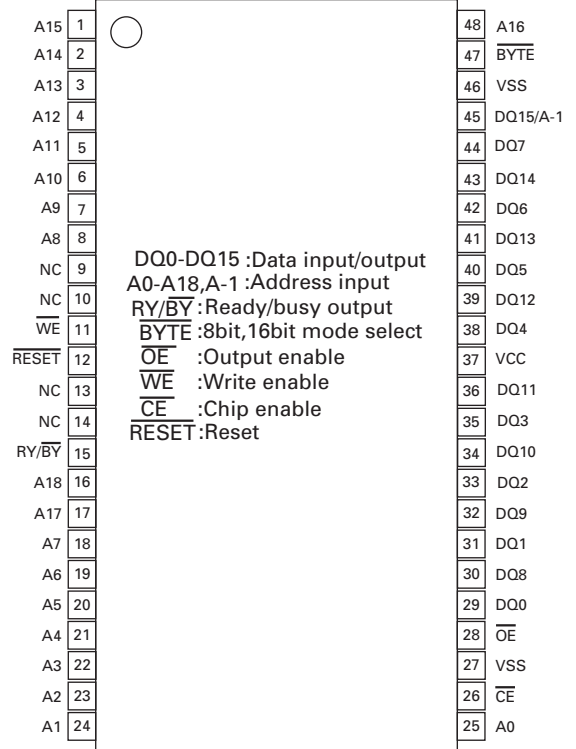
A ● Block Diagram Chart



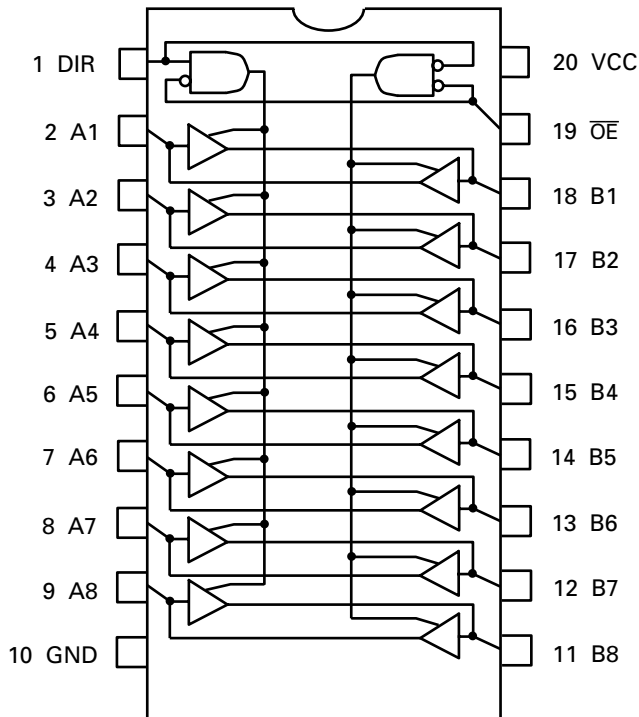
\* PEH007A



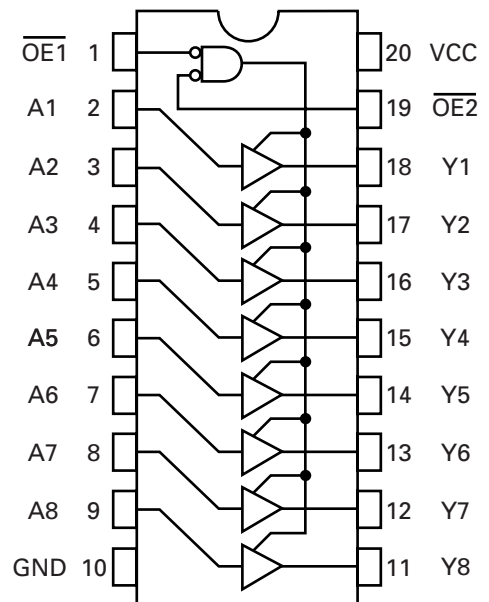
\* PEH008A



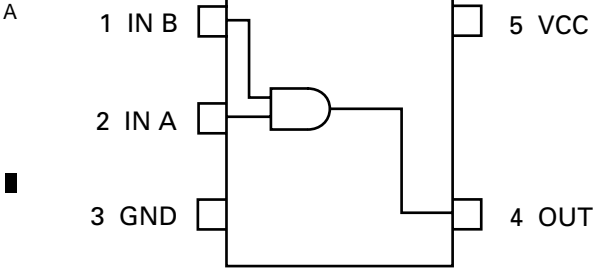
\* TC74LCX245FST1



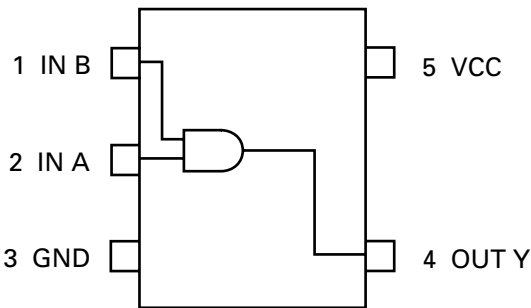
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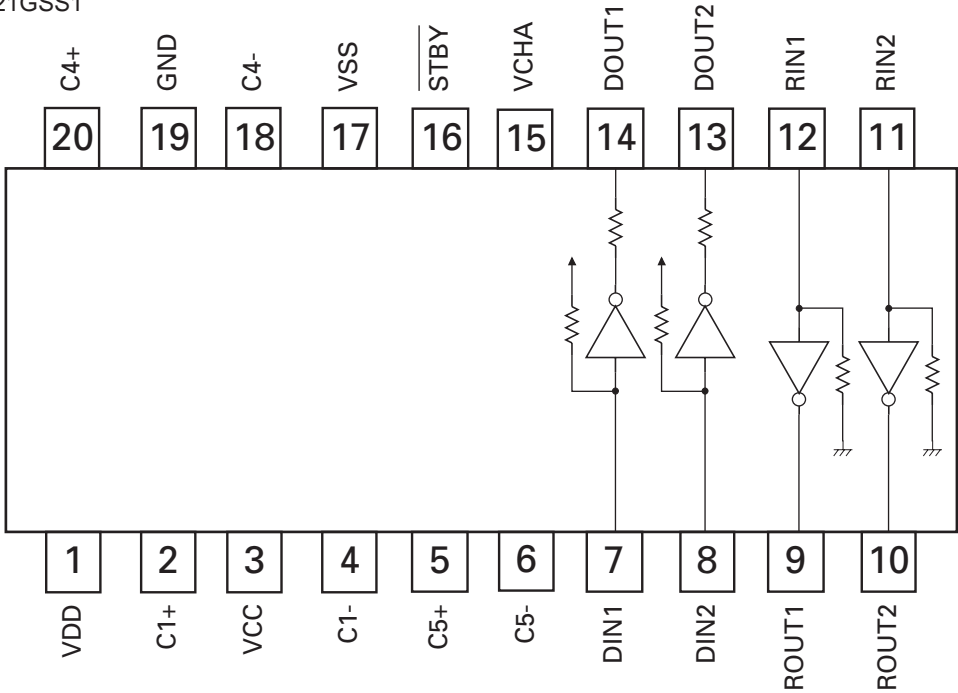
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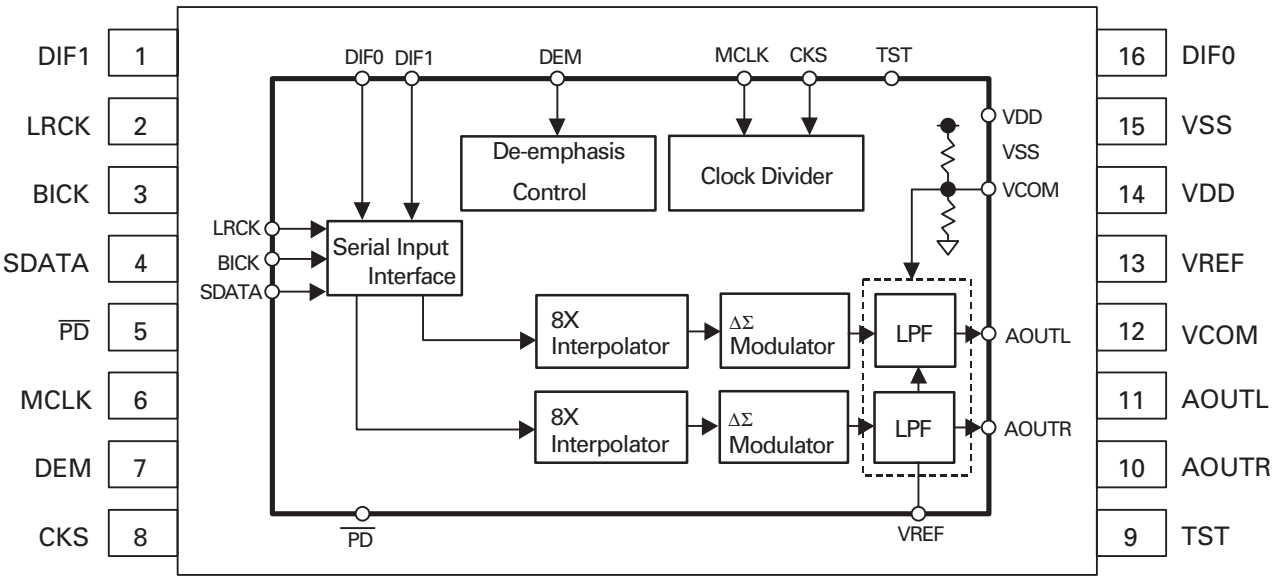
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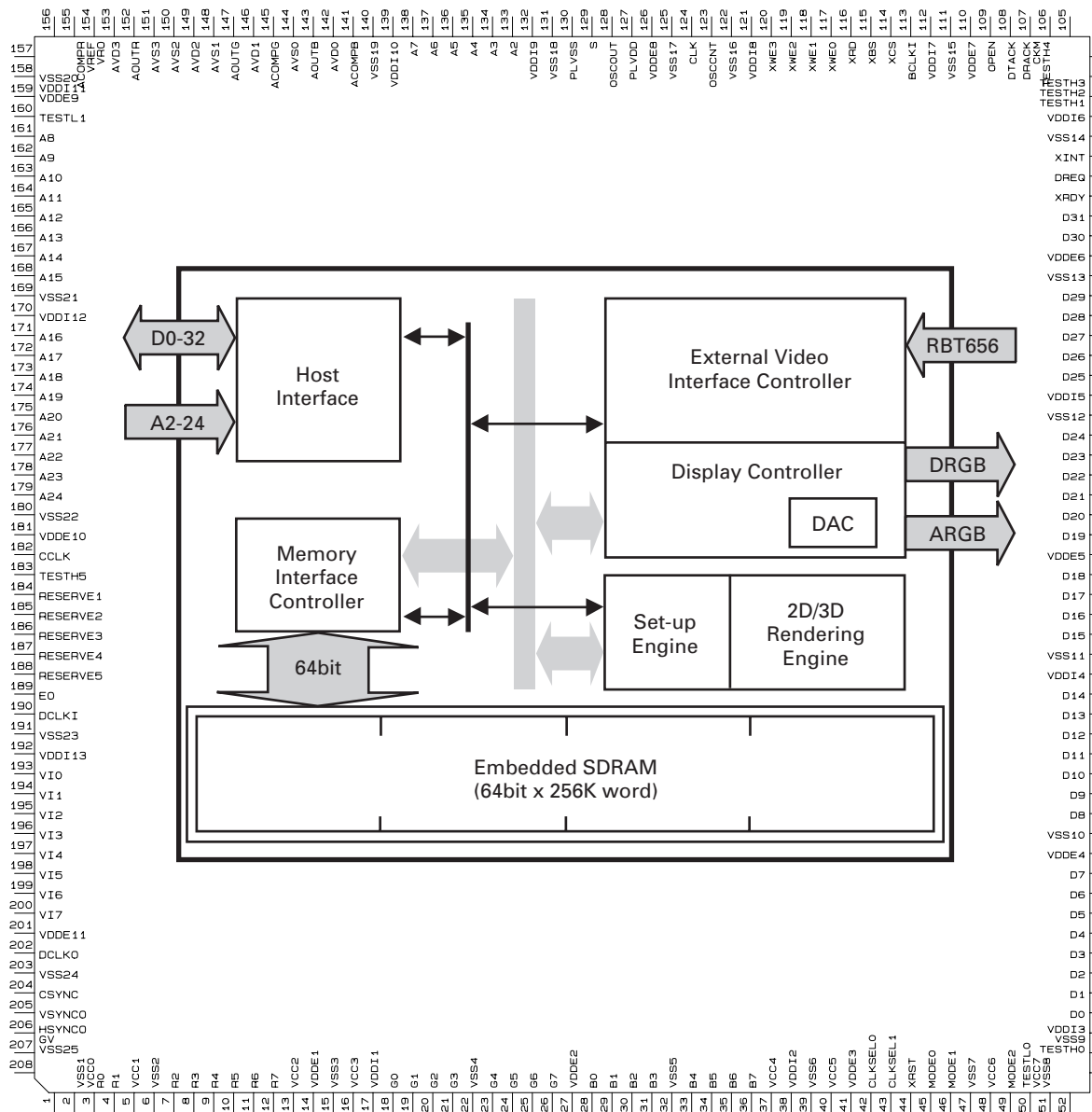
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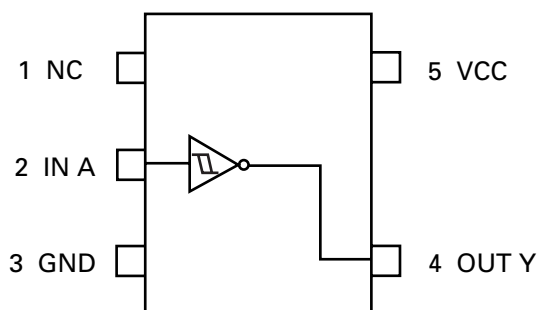
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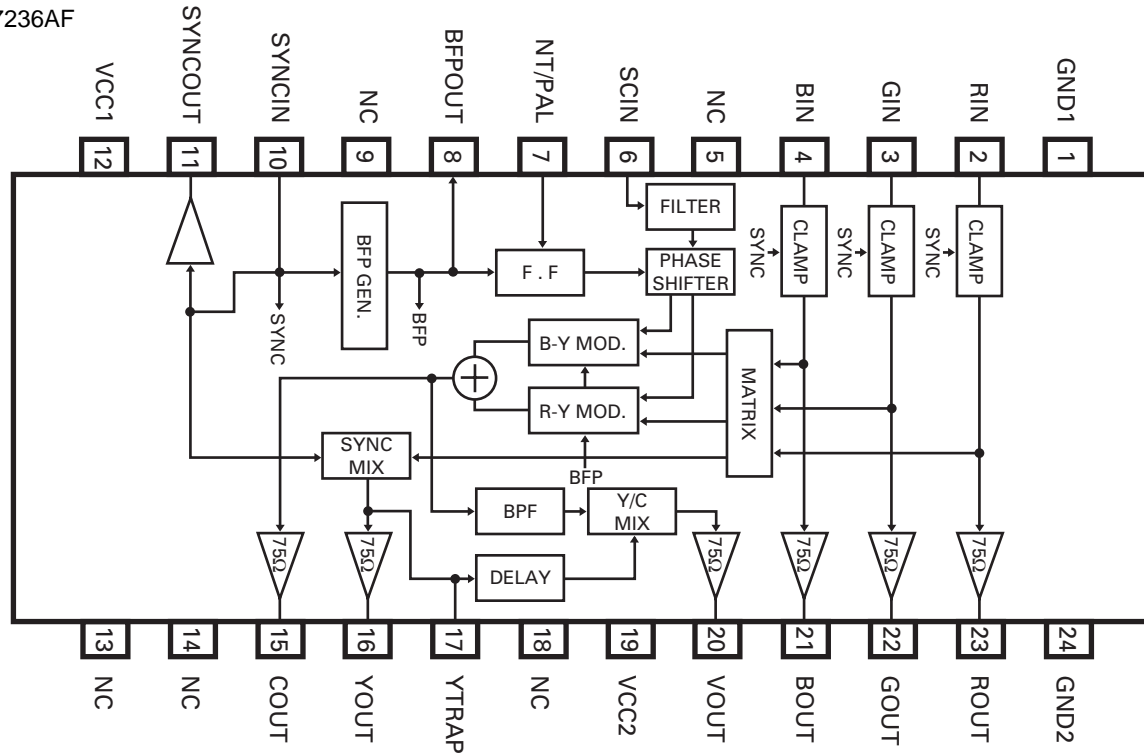
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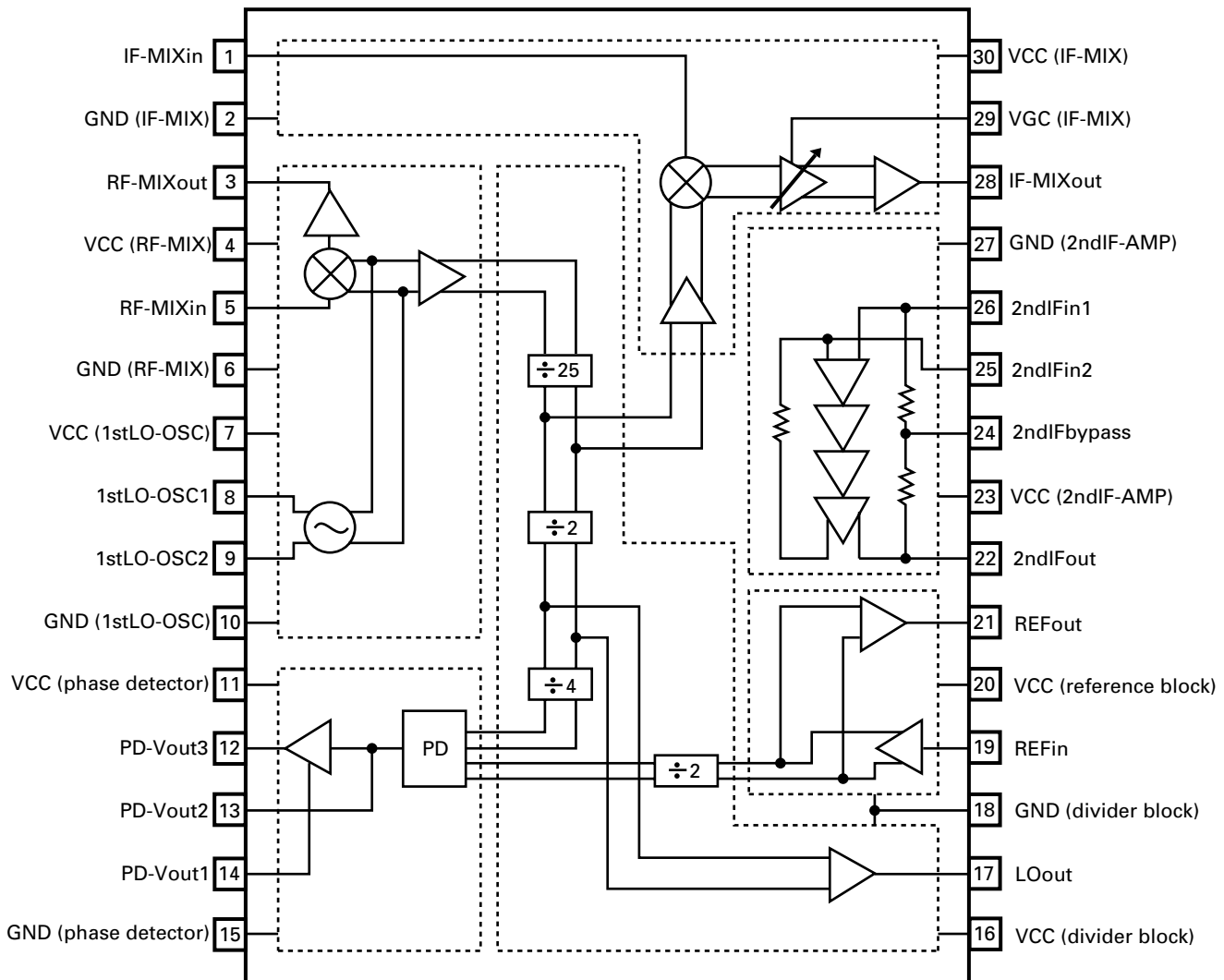
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## BH7236AF



## UPB1027GS



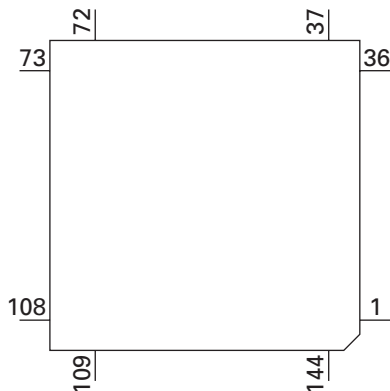
## ●Pin Functions(PD3390A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	VCC0			Power supply (3.3V)
2	VSS0			GND
3	TXD2	I/O		SIO2 Transmission data input / output
4	RXD2	I/O		SIO2 Reception data input / output
5	TXD1	O	C	SIO1 Transmission data output
6	RXD1	I		SIO1 Reception data input
7	TXD0	O	C	SIO0 Transmission data output
8	RXD0	I		SIO0 Reception data input
9	SPEED	I		SP I/F input
10	ADCSB	O	C	AD I/F output
11	ADSCK	O	C	AD I/F output
12	ADTXD	O	C	AD I/F output
13	ADRXD	I		AD I/F input
14	ADSRX	I		AD I/F input
15	ADIO0	I/O		AD I/F input / output
16	ADIO1	I/O		AD I/F input / output
17	ADIO2	I/O		AD I/F input / output
18	VCC1			Power supply (3.3V)
19	VSS1			GND
20	PWM	O		PWM signal output
21	PLINT	I		PLL I/F input
22	PLCE	O	C	PLL I/F output
23	PLSCK	O	C	PLL I/F output
24	PLTX	O	C	PLL I/F output
25	PLRX	I		PLL I/F input
26	PLIO0	I/O		PLL I/F input / output
27	PLIO1	I/O		PLL I/F input / output
28	PLIO2	I/O		PLL I/F input / output
29	DDINT	I		Darc I/F input
30	DDCE	O	C	Darc I/F output
31	DDSCK	O	C	Darc I/F output
32	DDTX	O	C	Darc I/F output
33	DDRX	I		Darc I/F input
34	DDIO0	I/O		Darc I/F input / output
35	DDIO1	I/O		Darc I/F input / output
36	DDIO2	I/O		Darc I/F input / output
37	TIOA0	I/O		Parallel input / output
38	TIOA1	I/O		Parallel input / output
39	TIOB0	I/O		Parallel input / output
40	TIOB1	I/O		Parallel input / output
41	VCC2			Power supply (3.3V)
42	VSS2			GND
43-53	A19-9	I/O		Address bus input / output
54	VCC3			Power supply (3.3V)
55	VSS3			GND
56-64	A8-0	I/O		Address bus input / output
65	VCC4			Power supply (3.3V)
66	VSS4			GND
67-82	D0-15	I/O		Address bus input / output
83	VCC5			Power supply (3.3V)
84	VSS5			GND
85	WRHB	I/O		Upper data write strobe input / output
86	WRLB	I/O		Lower data write strobe input / output
87	RDB	I/O		Read data strobe input / output
88	CS2B	I/O		Chip select aria 1 for external storage input / output
89	CS0B	I/O		Chip select aria 0 for ROM input / output
90	VCC6			Power supply (3.3V)

Pin No.	Pin Name	I/O	Format	Function and Operation
91	VSS6			GND
92	TEST2			Test mode
93	CKOEB	I		CK output enable input
94	CK	O	C	CPU clock output
95	CS5B	O	C	DRAM low address strobe output
96	CS3B	O	C	DRAM column address strobe output
97	CS1B	O	C	DRAM column address upper byte strobe output
98	RTCVSS1			Power supply (3.3V)
99	SRAMB	I		Backup memory select input
100	STANBYB	I		Stand by signal input
101	RTCVSS0			GND
102	XRTCIN	I		Sub crystal oscillator input (RTC)
103	XRTCOUT	O	C	Sub crystal oscillator output (RTC)
104	RTCVCC			Power supply (3.3V)
105	PCKSEL0	I		Processor clock select input
106	PCKSEL1	I		Processor clock select input
107	CCKSEL	I		CRCK signal select input
108	CCKDIR	I/O		Carrier clock direct input / inverter amp output
109	CCKVCC			Power supply (3.3V)
110	CRCK	I		Carrier clock input
111	CCKGND			GND
112-118	PC0-6	I/O		Parallel input / output
119	NMI			Connect to VCC
120	RESETB	I		System reset input
121	MSTRSTB	I		Test reset input
122	TEST0	I		Test mode input
123	TEST1	I		Test mode input
124	REFSEL	I		GPS reference clock select input
125	REFCK	I		Reference clock input
126	VCC7			Power supply (3.3V)
127	VSS7			GND
128	XAUXIN	I		Sub crystal oscillator output input (AUX)
129	XAUXOUT	O	C	Sub crystal oscillator output (AUX)
130-133	PIN0-3	I		Parallel input
134-137	PIO4-7	I/O		Parallel input / output
138	TXD3	I/O		SIO3 Transmission data input / output
139	RXD3	I/O		SIO3 Reception data input / output
140	BOWWOWB	O	C	Watch dog timer output
141	IFDIR	I/O		IF direct input / IF inverter amp output
142	IFVCC			Power supply (3.3V)
143	IF	I		IF input
144	IFGND	I		IF amp GND input

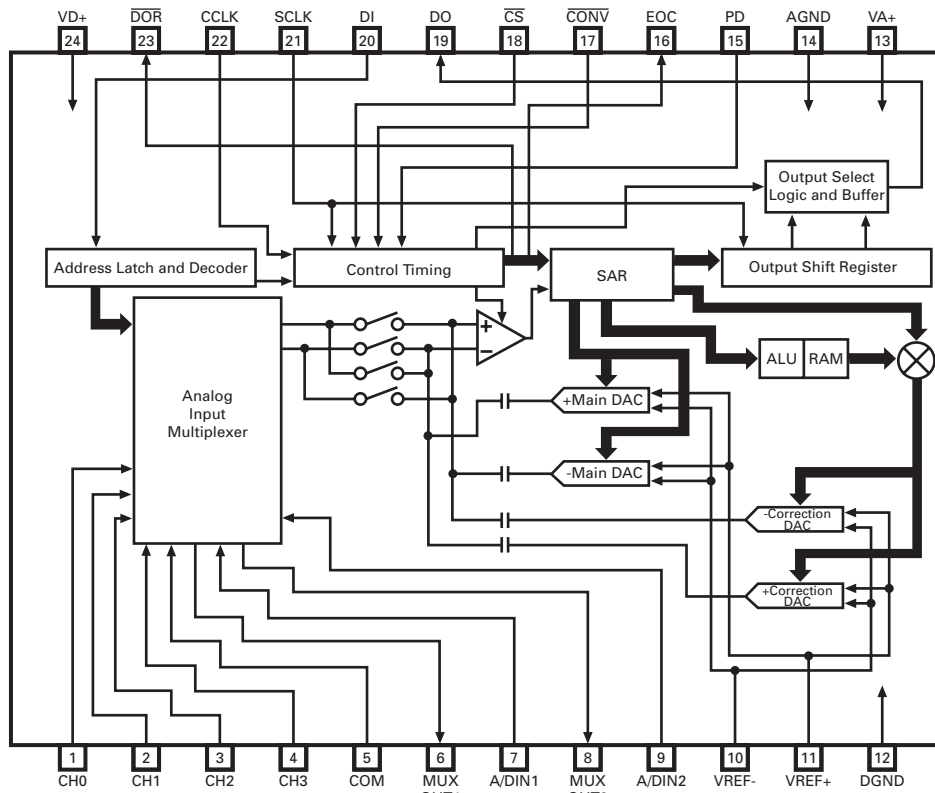
\* PD3390A

Format	Meaning
C	CMOS

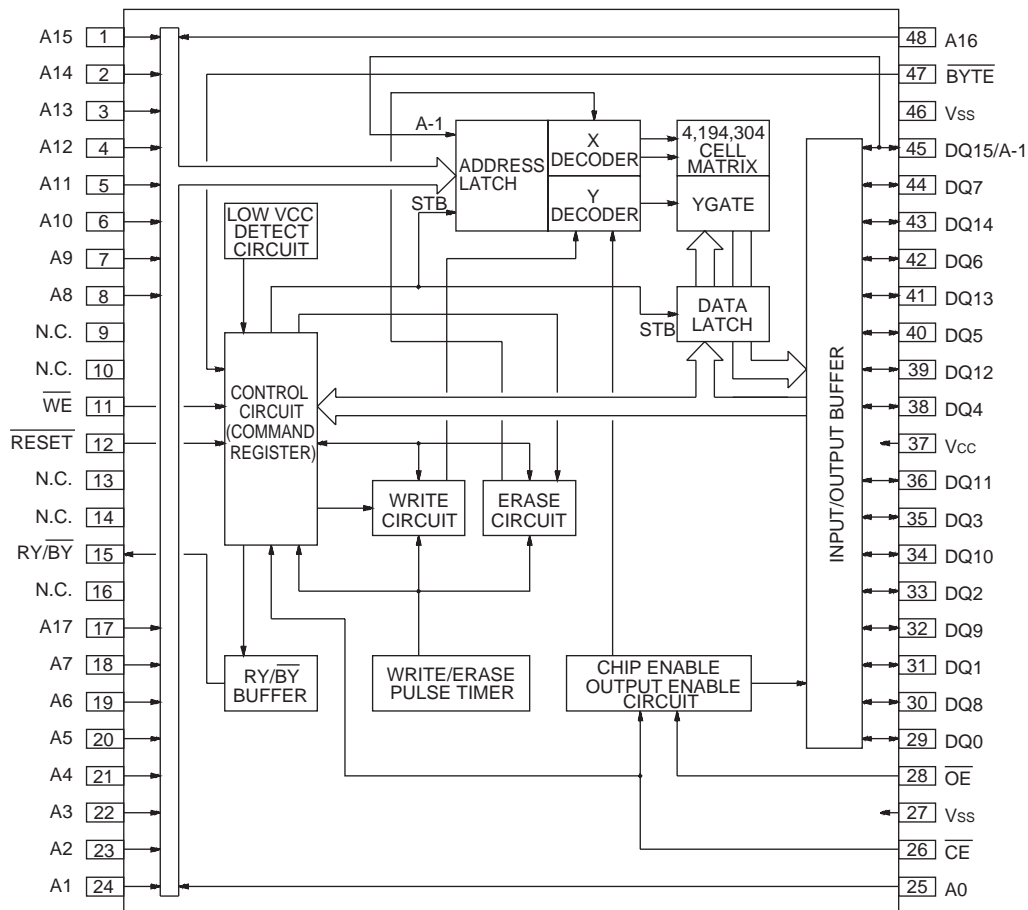




## ADC12H034CIMSAS1



\* PD6519A



## ●Pin Functions(PE5479A)

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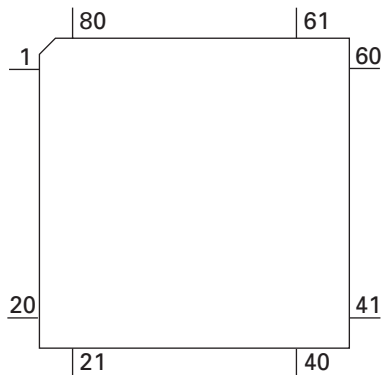
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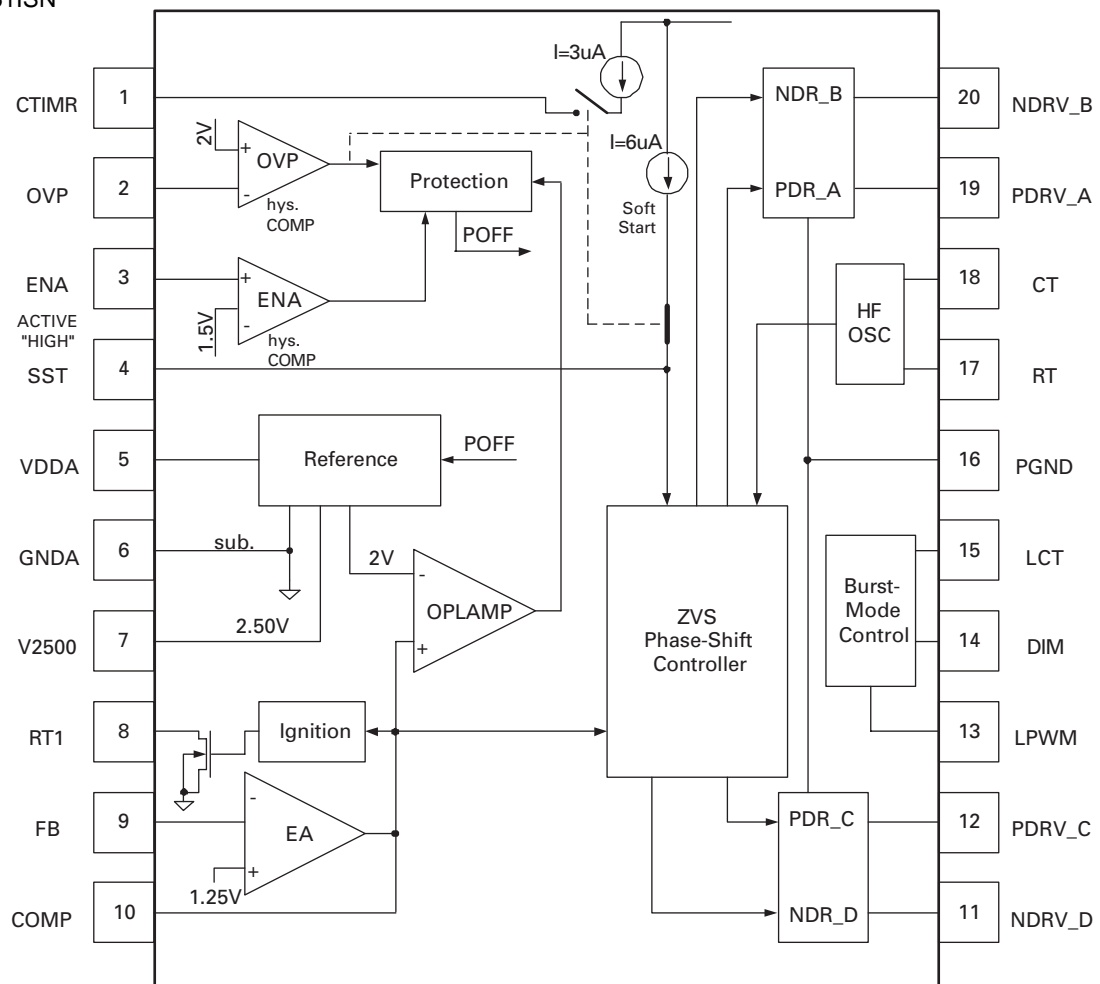
Pin No.	Pin Name	I/O	Function and Operation
1	PNLADX	I	X directions analog input
2	LSEN	I	Lens sense input
3	PNLADY	I	Y directions analog input
4	AVSS		A/D converter GND
5	DIMMER	O	Dimmer analog output
6	INVBST_DA	O	Back light boost signal output (low temperature)
7	AVREF1		D/A converter reference voltage
8	RXD	I	Data input from system microcomputer (UART)
9	TXD	O	Data output to system microcomputer (UART)
10	MFLPW	O	Back light control output
11	LKYDT	I	Data input from LCD micro computer (UART)
12	LDPDT	O	Data output to LCD micro computer (UART)
13	MVIPW	O	Picture power supply control output
14	OSDCS	O	OSD chip select output
15	NC		Not used
16	TSI	I	Test program data input
17	TSO	O	Test program data output
18	TSCK	I	Test program clock input
19	OVICHK	I	Back light power supply overcurrent detect input
20	EPRRST	I	EEPROM reset input
21	EPRTST	I	EEPROM data setup mode input
22	STEST	I	Monitor operation mode input
23	STEST2	I	Touch panel test mode input
24	PNLXV	O	Hi output is carried out when X directions is detected
25	PNLYV	O	Hi output is carried out when Y directions is detected
26	NC		Not used
27	SDA	I/O	IC data input / output
28	SCL	O	IC clock output
29	PIPRES	O	IC reset output
30	LSWVDD	O	LCD micro computer power supply control output
31	PNLVD	O	Touch panel power supply control output
32	NC		Not used
33	VSS1		GND
34-37	NC		Not used
38	ROMDATA		Not used
39	ROMCLK		Not used
40	POMCS		Not used
41,42	NC		Not used
43	INVBST		Not used
44	INVPUL	O	Inverter pulse output
45	BEEP		Not used
46	EPRCS	O	EEPROM chip select output
47	EPRSK	O	EEPROM serial clock output
48	EPRDO	O	EEPROM serial data output
49	EPRDI	I	EEPROM serial data input
50	EPRPROT	O	EEPROM memory protect output
51	TESTIN	I	Chip test input
52	NC		Not used
53	LDIMMER		Not used
54	LBKL	O	LCD micro computer back light power supply control output
55,56	NC		Not used
57	LCDTYPE1	I	LCD panel type detect input1
58	NC		Not used
59	LCDTYPE2	I	LCD panel type detect input2
60	RESET	I	Reset input
61	REMIN	I	Remote control data input
62	VDDSENS	I	Power supply sense input
63	ROT0	I	Rotary encoder input0
64	ROT1	I	Rotary encoder input1
65	LCDLR		Not used
66	TVIND		Not used
67	VSS0		GND
68	VDD1		Power supply
69	X2		Crystal oscillator connection pin
70	X1		Crystal oscillator connection pin
71	VPP		Not used
72	XT2		Not used

Pin No.	Pin Name	I/O	Function and Operation
73	XT2		GND
74	VDD0		Power supply
75	AVDD		A/D converter power supply
76	KEY0	I	Analog key data input 0
77	KEY1	I	Analog key data input 1
78	KEY2	I	Analog key data input 2
79	KEY3	I	Analog key data input 3
80	TEMPSEN	I	Temperature sense input (back light boost)

\* PE5479A

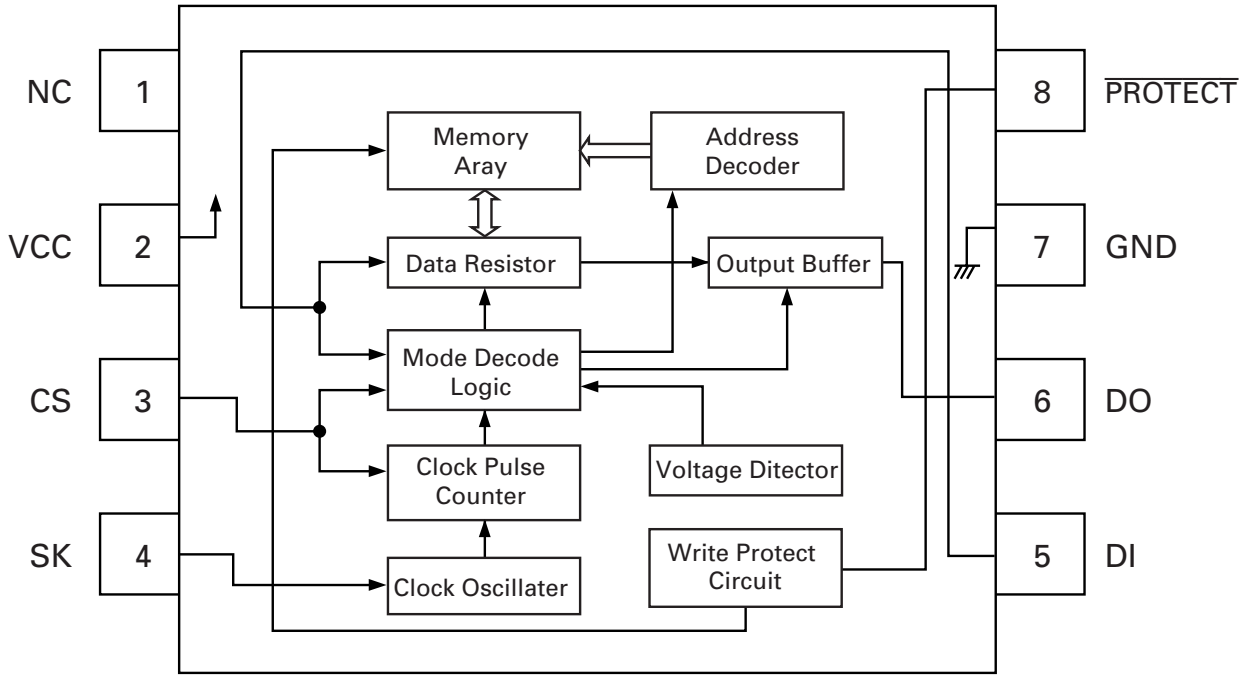


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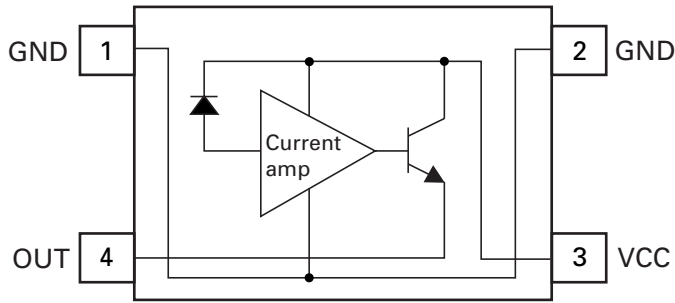
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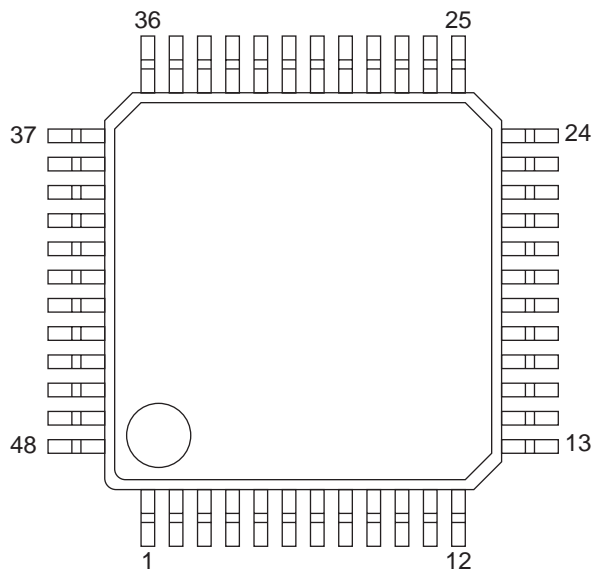
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BD6171KV

● Pin Arrangement Chart

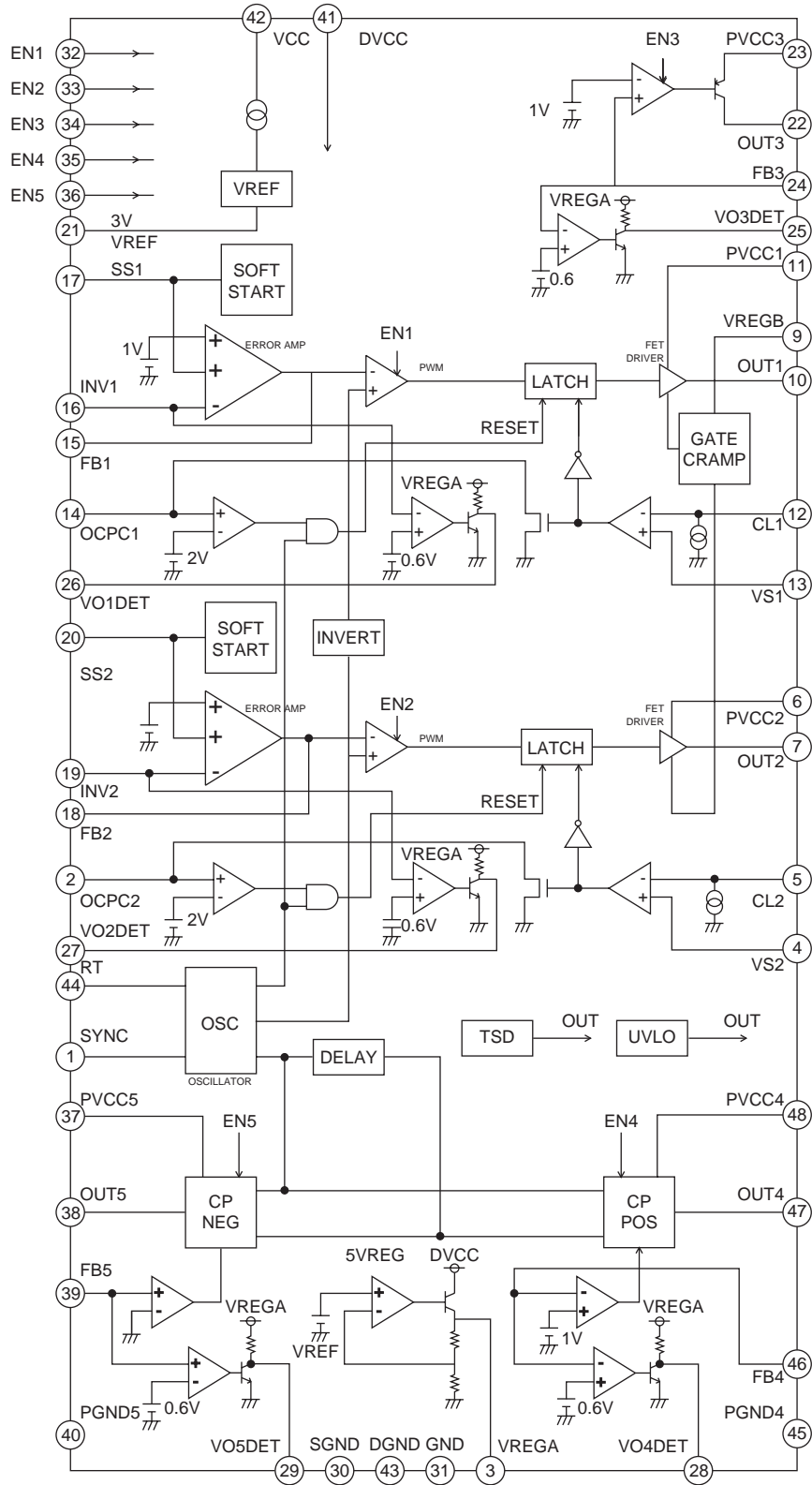


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# BD6171KV

## ● Block Diagram Chart

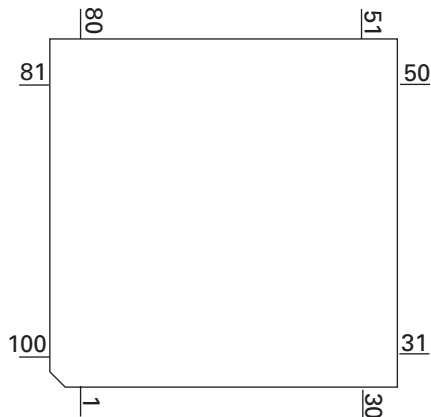


# **● Pin Functions (PE5478A)**

Pin No.	Pin Name	I/O	Function and Operation
1	STOC	O	Navigation microcomputer data output (UART)
2	FCONT	O	AM noise measures output
3	CSENSOUT	O	Flap close sense output
4,5	NC		Not used
6	MTOS	I	Monitor microcomputer data input (UART)
7	STOM	O	Monitor microcomputer data output (UART)
8	TSCK		Not used
9	EVDD		Power supply
10	EVSS		GND
11	SWACPW	O	Monitor microcomputer power supply output
12	SYSPW	O	System power supply output
13	BRST	O	P-BUS : Reset output
14	BSRQ	I	P-BUS : Communication request input
15	BSI	I	P-BUS : Data input
16	BSO	O	P-BUS : Data output
17	BSCK	I/O	P-BUS : Clock input/output
18,19	VSELIN1,2	I	AV-BUS : VSEL input 1,2
20	AVONIN	I	AV-BUS : AVON input
21	VPP		VSS
22	VCK	O	E. VOL : Clock output
23	VDT	O	E. VOL : Data output
24	VST	O	E. VOL : Strobe pulse output
25	MUTEVOL	O	E. VOL : Mute output
26	RX	I	IP-BUS : Data input
27	TX	O	IP-BUS : Data output
28	IPPW	O	IP-BUS : Driver power supply control output
29	ASENBO	O	IP-BUS : ACC sense output
30	BRXEN	O	P-BUS : Possible to receive output
31	ROMDATA		Not used
32	ROMCLK		Not used
33	ROMCS		Not used
34	RESET	I	System reset input
35	XT1		Not used
36	XT2		Not used
37	REGC		Not used
38	X2		Crystal oscillator connection pin
39	X1		Crystal oscillator connection pin
40	VSS		GND
41	VDD		Power supply
42	PCL		Not used
43,44	PULSE0,1	I	Pulse detect input 0,1
45,46	MOT0,1	O	Flap motor driver output 0,1
47	MOTPW	O	Flap motor power supply output
48	OPENSW	I	Flap angle OPEN position sense input
49	HOMESW	I	Flap angle CLOSE position sense input
50	EJECTSW	I	Flap angle CD EJECT position sense input
51	MUTENS	O	Mute output at the time of MIX
52	NOSELL	O	Navigation voice Lch MIX control output
53	NOSELR	O	Navigation voice Rch MIX control output
54	DRAMPW	O	Navigation control DRAMPW output
55	CCON	O	Navigation control CCON output
56	IRQPW	O	Navigation control IRQPW output
57	YSRST	O	Navigation control RSTOUT output
58	BVDD		Power supply
59	BVSS		GND
60	ANTPW	O	Auto antenna control output
61	ILMPW	O	Illumination power supply switch output
62	FLAPILM	O	Panel illumination switch output
63	MEMOLED	O	MEMO button LED control output
64	DALMON	O	Consumption current reduction output

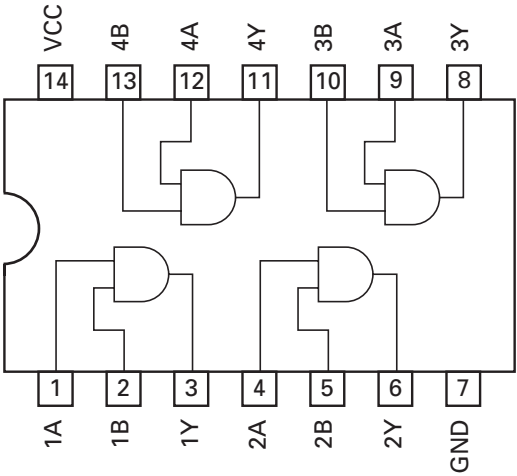
Pin No.	Pin Name	I/O	Function and Operation
65	AMPSTBY	O	Amp stand-by output
66	FANUP	O	Fan motor control output
67	MUTEALL	O	Mute output
68	MUTEAMP	O	Amp mute output
69,70	VFSEL0,1	O	Front monitor source select output 0,1
71	FVMUTE	O	Front monitor mute output
72	VRSEL	O	Rear monitor source select output
73	REARON	O	Rear monitor ON output
74	AVDD		A/D converter power supply
75	AVSS		A/D converter GND
76	AVREF		A/D converter reference voltage
77	TUNSL	I	Tuner signal level input
78	NTEMPIN	I	Navigation temperature sense input
79	WREMIN	I	Wired remote control analog value input
80	WCONT	I	Wired remote control SEL input
81	RST3	I	Navigation control reset input
82	XCCSTBY	I	Navigation stand-by OK input
83	CPUWDT	I	Navigation watch dog timer input
84	TELIN	I	Telephone mute input
85	PBSENS	I	Parking brake sense input
86	REVSENS	I	Reverse gear sense input
87	TESTIN	I	Test mode input
88	TIMEOUT	I	Timeout input
89	NMI		Pull down
90	BSENS	I	Backup sense input
91	ASENS	I	ACC sense input
92	ILMSENS	I	Illumination sense input
93	DVDEJECT	I	DVD EJECT key input
94	CDEJECT	I	CD EJECT key input
95	TUNCE1	O	Tuner : PLL chip enable output
96	TUNCE2	O	Tuner : EEPROM chip enable output
97	TUNPDI	I	Tuner : Data input (SIO)
98	TUNPDO	O	Tuner : Data output (SIO)
99	TUNCK	O	Tuner : Data clock output (SIO)
100	CTOS	I	Navigation microcomputer data input (UART)

\* PE5478A



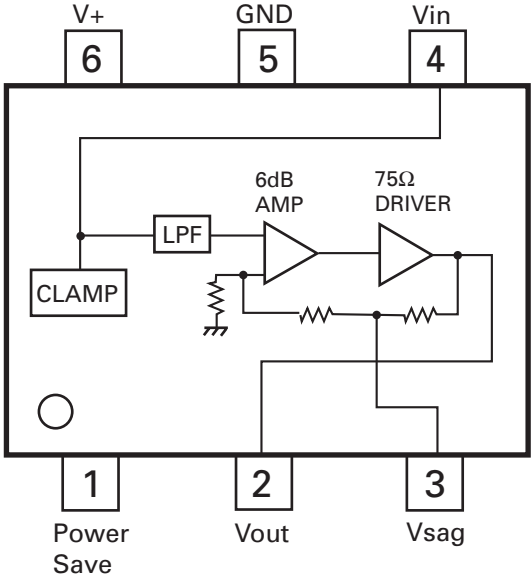
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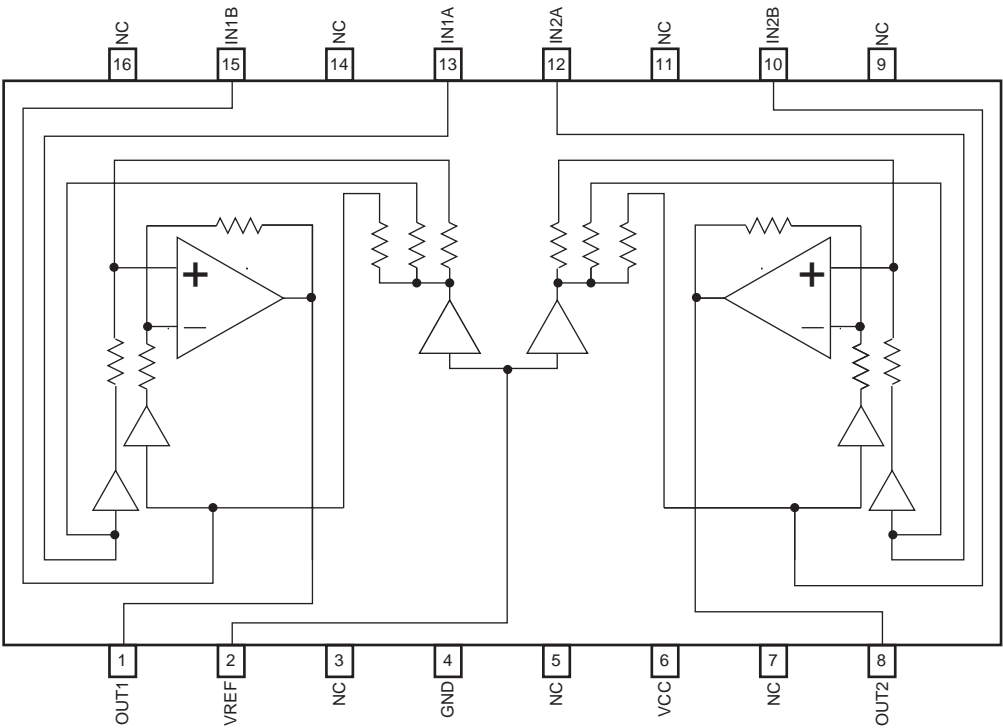
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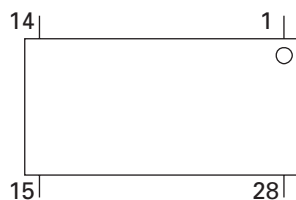
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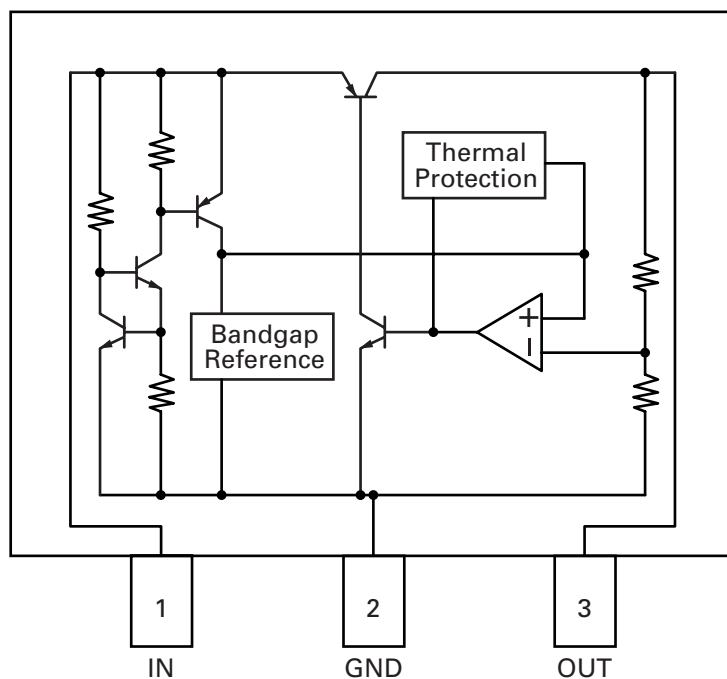
### ● Pin Functions(BA5835FP)

Pin No.	Pin Name	Function and Operation
1	VR	Input pin for reference voltage
2	OPIN2(+)	Input pin for non-inverting input for CH2 preamplifier
3	OPIN2(-)	Input pin for inverting input for CH2 preamplifier
4	OPOUT2	Output pin for CH2 preamplifier
5	OPIN1(+)	Input pin for non-inverting input for CH1 preamplifier
6	OPIN1(-)	Input pin for inverting input from CH1 preamplifier
7	OPOUT1	Output pin for CH1 preamplifier
8	GND	Ground pin
9	MUTE	Mute control pin
10	POWVCC1	Power supply pin for CH1, CH2, and CH3 at "Power" stage
11	VO1(-)	Driver CH1 - Negative output
12	VO1(+)	Driver CH2 - Positive output
13	VO2(-)	Driver CH2 - Negative output
14	VO2(+)	Driver CH2 - Positive output
15	VO3(+)	Driver CH2 - Positive output
16	VO3(-)	Driver CH2 - Negative output
17	VO4(+)	Driver CH4 - Positive output
18	VO4(-)	Driver CH4 - Negative output
19	POWVCC2	Power supply pin for CH4 at "Power" stage
20	GND	Ground pin
21	CNT	Control pin
22	LDIN	Loading input
23	OPOUTSL	Output pin for preamplifier for thread
24	OPINLSL	Input pin for preamplifier for thread
25	OPOUT3	CH3 preamplifier output pin
26	OPIN3(-)	Input pin for inverting input for CH3 preamplifier
27	OPIN3(+)	Input pin for non-inverting input for CH3 preamplifier
28	PREVCC	PreVcc

BA5835FP



NJM2885DL1-33

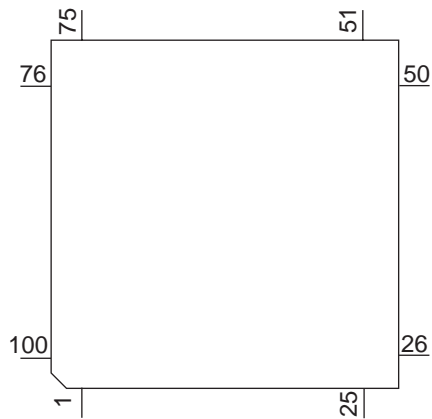


# **Pin Functions(PE5454B)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF			A power supply Positive power supply(5V)
2	AVSS			A power supply GND
3	RFOK	O	C	Output of state of RFOK
4	NC			Not used
5	EVDD			E power supply Positive power supply
6, 7	NC			Not used
8	IC/FLMOD0			IC : VSS direct connection/FLMOD0 : Pull-down
9	VDD			Positive power supply(5V)
10	REGC			Connected to the capacity stabilizing output of the regulator
11	VSS			GND
12	X1	I		Oscillator connection for mainclock
13	X2			Oscillator connection for mainclock
14	RESET	I		System reset input
15	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
16	XT2			Connected to the oscillator for subclock(Open)
17	NC			Connected to EVDD or EVSS via the resistor
18	NC			Not used
19	XINT	I	C	CD LSI interruption signal input
20	NC			Connected to VSS via the resistor
21	BRST	I		P-Bus reset input
22	BSI	I		P-Bus serial data input
23	BSO	O	C	P-Bus serial data output
24	BSCK	I/O	/C	P-Bus serial clock input/output
25	FTXD	O	C	For flash rewriting output(transmitted signal)
26	FRXD	I		For flash rewriting input(received signal)
27	BRXEN	I/O	/C	It is possible to receive P-Bus input/output
28	BSRQ	I/O	/C	P-Bus service request demand input/output
29	NC			Not used
30	DSCSNS	I		Disc state sense input
31	8EJ(S905)	I		Input of detection of 8 cm disc ejection
32	12EJ(S904)	I		Input of detection of 12 cm disc ejection
33	EVSS			E power supply GND
34	EVDD			E power supply Positive power supply
35, 36	SRAMLEVEL0, 1	O	C	SRAM level meter output
37	EMPH	O	C	Emphasis information output
38	EMPH	O	C	Emphasis information output
39-42	NC			Not used
43	ADENA	O	C	A/D reference voltage supply control output
44	LRCKOK	O	C	(DOUT mute output)
45	SRAMLEVEL2	O	C	SRAM level meter output
46	CD3VON	O	C	CD +3.3V power supply control output
47	CONT	O	C	Servo driver power supply control output
48	XRST	O	C	CD LSI reset control output
49	VDCONT	O	C	VD power supply control output
50	ROMDATA	I/O	/C	E2PROM data input/output
51	ROMCS	O	C	E2PROM chip selection output
52	ROMCK	O	C	E2PROM clock output
53	LOEJ	O	C	The direction change output of LOAD/EJECT
54	CLCONT	O	C	Driver input change output
55	CDMUTE	O	C	CD mute control output
56-58	NC			Not used
59	XCS	O	C	CD LSI chip selection output
60	NC			Not used
61	XWAIT	I		CD LSI write control signal input
62	CLKOUT	O	C	Internal system clock output(Open)
63	LOCK	I		Spindle lock input
64	NC			Not used
65	XWRITE	O		CD LSI write control signal output
66	NC			Not used

Pin No.	Pin Name	I/O	Format	Function and Operation
67	XREAD	O		CD LSI read control signal output
68	XASTB	O		CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply
71-83	AD0-12	I/O	/C	Address/data Bus 0-12
84-86	NC			Not used
87	FMODE	I		For flash rewriting Connected to VSS via the resistor
88	FLRQ	O	C	For flash rewriting
89-93	NC			Not used
94	CSENS	I		Flap closing sense input
95	TYPE_A/D	I		CD-DA analog/digital output change setup
96	TESTIN	I		Chip check test program starting input
97	HOME	I		Home SW sense input
98	TEMP	I		Temperature information sense input
99	VDSSENS	I		VD power supply short sense input
100	NC			Not used

\* PE5454B



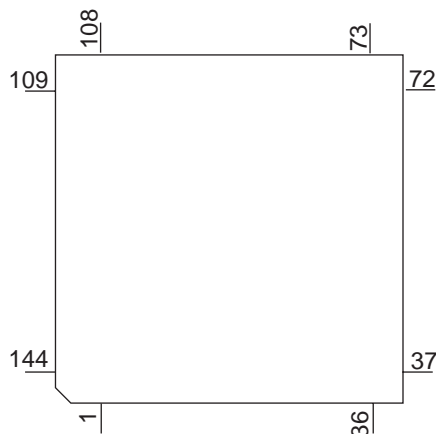
Format	Meaning
C	CMOS

# **Pin Functions(UPD63763GJ)**

Pin No.	Pin Name	I/O	Function and Operation
1	D.VDD		Power supply for digital circuits
2	D1.GND		GND for 1.6V digital circuits
3	RESET	I	Input of reset
4-8	AB12-8	I	Address bus 12-8 from the microcomputer
9-16	AD7-0	I/O	Address/data bus 7-0 to the microcomputer
17	$\overline{CS}$	I	Chip selection
18	ASTB	I	Address strobe
19	READ	I	Control signals(read)
20	WRITE	I	Control signals(write)
21	WAIT	O	Control signals(wait)
22	INTQ	O	Interruption signals to the external microcomputer
23, 24	IFMODE0, 1	I	Switching the microcomputer I/F 0, 1
25	D1.VDD		Power supply for 1.6V digital circuits
26	DA.VDD		Power supply for DAC
27	ROUT	O	Output of audio for the right channel
28	DA.GND		GND for DAC
29	REGC		Connected to the capacitor for band gap
30	DA.GND		GND for DAC
31	LOUT	O	Output of audio for the left channel
32	DA.VDD		Power supply for DAC
33	X.VDD		Power supply for the crystal oscillator
34	XTAL	I	Connected to the crystal oscillator(16.9344MHz)
35	$\overline{XTAL}$	O	Connected to the crystal oscillator(16.9344MHz)
36	X.GND		Ground for the crystal oscillator
37	VDDREG15		Control of 1.6V regulator
38	PWMSW0	I	Setup 0 for PWM output(SD, MD)
39-41	TEST3-1	I	Connected to GND
42	PWMSW1	I	Setup 1 for PWM output(FD, TD)
43	TESTEN	I	Connected to GND
44	D1.GND		GND for 1.6V digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	$\overline{XTALEN}$	I	Permission to oscillate 16.9344MHz
52	D1.VDD		Power supply for 1.6V digital circuits
53	RFCK/HOLD	O	Output of RFCK/HOLD signal
54	WFCK/MIRR	O	Output of WFCK/MIRR signal
55	PLCK/RFOK	O	Output of PLCK/Output of RFOK
56	LOCK/RFOK	O	Output of LRCK/Output of RFOK
57	C1D1/C8M	O	Information on error correction/C8M : 8MHz
58	C1D2/C16M	O	Information on error correction/C16M : 16MHz
59	C2D1/RMUTE	O	Information on error correction/Mute for Rch
60	C2D2/LMUTE	O	Information on error correction/Mute for Lch
61	C2D3/SHOCK	O	Information on error correction/Detection of vibration
62	D1.GND		GND for 1.6V digital circuits
63	C33M	O	Output of 33.8688MHz(CLK for SDRAM)
64	(RCS)	O	DRAM $\overline{CS}$
65	RA11	O	Output of DRAM address 11
66	(CKE)	O	Output of DRAM CKE
67	$\overline{RAS}$	O	Output of DRAM $\overline{RAS}$
68	$\overline{CAS0}$ (LDQM)	O	Output of DRAM lower $\overline{CAS}$ (LDQM)
69	$\overline{CAS1}$ (UDQM)	O	Output of DRAM upper $\overline{CAS}$ (UDQM)
70	$\overline{WE}$	O	Output of DRAM $\overline{WE}$
71	OE(CAS)	O	Output of DRAM OE(CAS)
72	D.GND		Ground for digital circuits
73-88	RDB0-15	I/O	Input/output of DRAM data0-15
89-99	RA0-10	O	Output of DRAM address0-10

Pin No.	Pin Name	I/O	Function and Operation
100	D.VDD		Power supply for digital circuits
101	FD+	O	Output of focus drive PWM +
102	FD-	O	Output of focus drive PWM -
103	TD+	O	Output of tracking drive PWM +
104	TD-	O	Output of tracking drive PWM -
105	SD+	O	Output of thread drive PWM +
106	SD-	O	Output of thread drive PWM -
107	MD+	O	Output of spindle drive PWM +
108	MD-	O	Output of spindle drive PWM -
109	REFOUTSV	O	REFOUT for servo
110	AD.VDD		Power supply for ADC
111	EFM	O	Output of EFM signals
112	ASY	I	Input of asymmetry
113	ATEST	O	Analog tests
114	RFI	I	Input of RF
115	AD.GND		Ground for the analog system
116	AGCO	O	Output of RF
117	C3T	O	Connection to the capacitor for detecting 3T
118	AGCI	I	Input of AGC
119	RFO	O	Output of RF(AGC)
120, 121	EQ2, 1	I	Equalizer 2, 1
122	RF2-	I	Reversal input of RF2
123	RF-	I	Reversal input of RF
124	A.GND		Ground for the analog system
125	A	I	Input of A
126	C	I	Input of C
127	B	I	Input of B
128	D	I	Input of D
129	F	I	Input of F
130	E	I	Input of E
131	VREFIN	I	Input of reference voltage
132	A.VDD		Power supply for the analog system
133	REFOUT	O	Output of reference voltage
134	REFC	I	Connected to the capacitor for output of REFOUT
135	FE-	I	Reversal input of FE
136	FEO	O	Output of FE
137	ADIN	I	Input of FE, TE A/D converter
138	TE-	I	Reversal input of TE
139	TEO	O	Output of TE
140	TE2	O	TE2
141	TEC	I	TEC
142	LD	O	Output of LD
143	PD	I	Input of PD
144	D.GND		Ground for digital circuits

\* UPD63763GJ



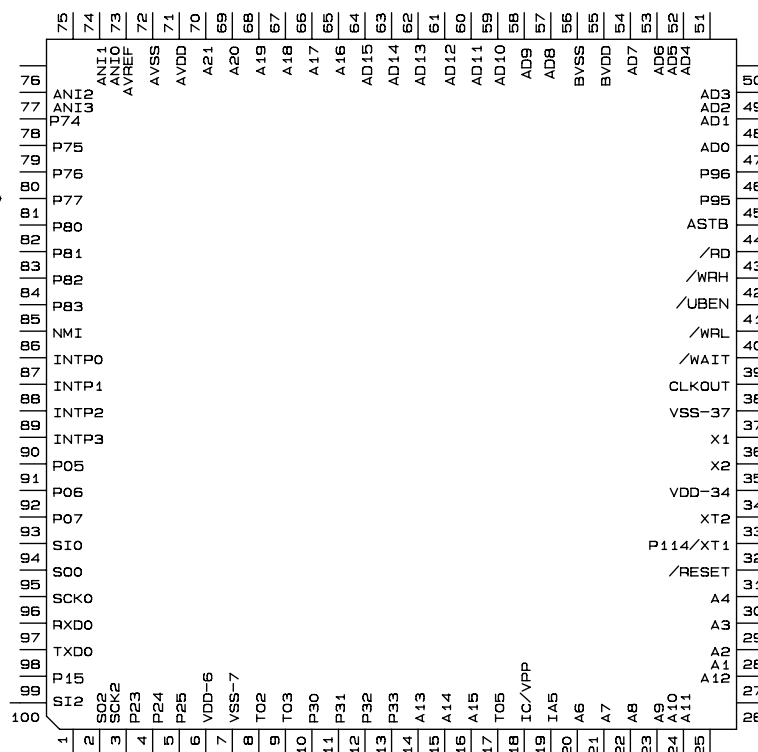
\* PE5430A

# ● Pin Arrangement Chart

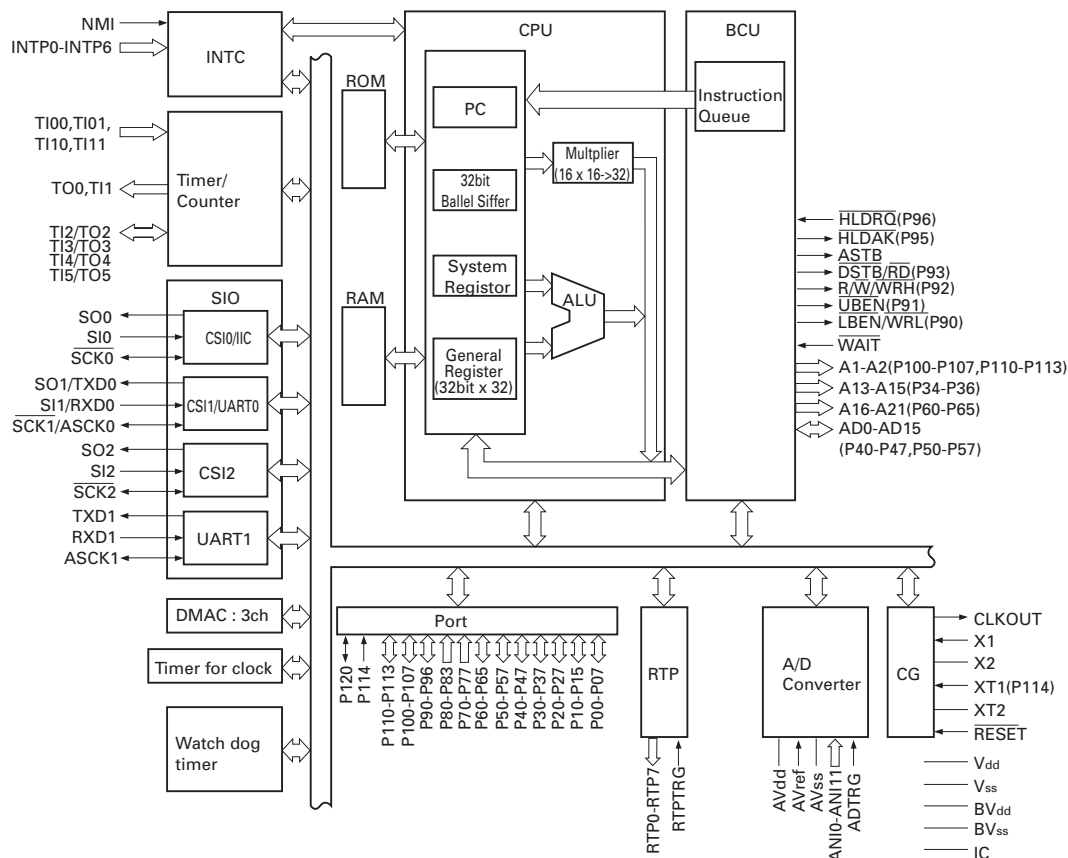
A

B

C

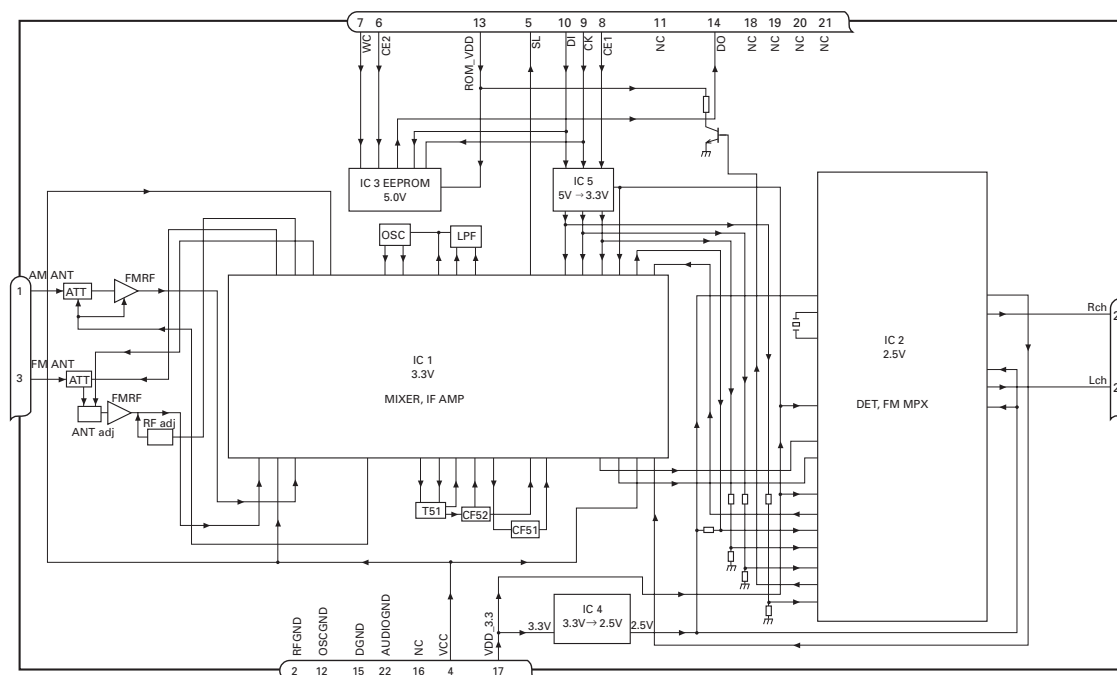


## ● Block Diagram Chart



F

# ● FM/AM Tuner Unit



No.	Symbol	I/O	Explain
1	AMANT	I	AM antenna input AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground Ground of antenna block
3	FMANT	I	FM antenna input Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level Output of FM/AM signals level
6	CE2	I	chip enable-2 Chip enable for EEPROM "Low" active
7	WC	I	write control You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1 Chip enable for AF•RF "High" active
9	CK	I	clock Clock
10	DI	I	data in Data input
11	NC		non connection Not used
12	OSCGND		osc ground Ground of oscillator block
13	ROM_VDD		power supply Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out Data output
15	DGND		digital ground Ground of digital block
16	NC		non connection Not used
17	VDD_3.3		power supply The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection Not used
19	NC		non connection Not used
20	NC		non connection Not used
21	NC		non connection Not used
22	AUDIOGND		audio ground Ground of audio block
23	L ch	O	L channel output FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output FM stereo "R-ch" signal output or AM audio output

## 7.3 EXPLANATION

### 7.3.1 MECHANISM DESCRIPTIONS

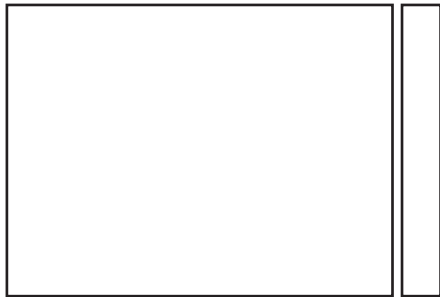
#### ● FLAP Operation Specification

##### 1. Outline

Slide open method is adopted, and 4 positions of closed, angle adjustment, half open and full open are considered the basic positions.

##### (1) Closed

This status is always taken once at power supply ON since flap is completely closed and it is the reference point for flap operation startup.

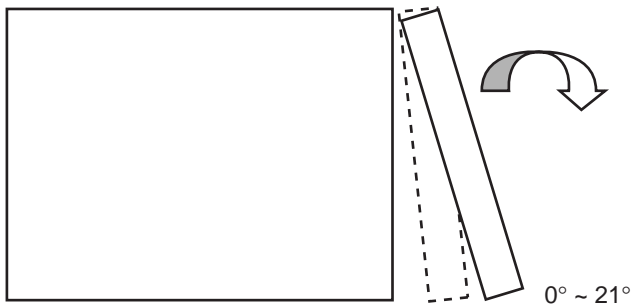


##### (2) Angle Adjustment

Position for visibility adjustment.

The angle can be adjusted in 5 stages from the closed position to the maximum angle (approximately 20°) within the adjustable range by the angle key.

The angle has toggle operation, and it executes close operation as follows when it reaches the maximum angle.



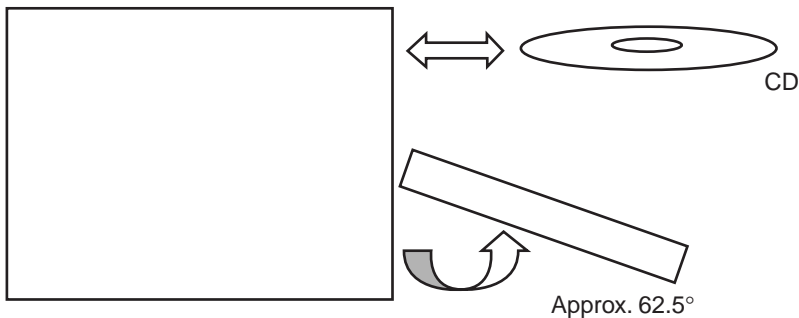
##### (3) Half Open

Position for DISC replacement on upper stage (CD).

It slides down to angle 12 when OPEN/CLOSE key is pressed quickly at the closed or angle adjustment position.

CD insertion/EJECT operation is possible from this position.

At the half open position, LAST position is restored when OPEN/CLOSE key is pressed quickly.





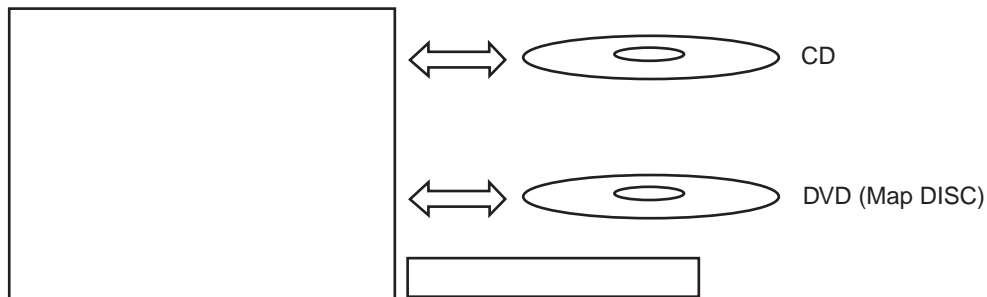
#### (4) Full Open

Position for DISC replacement on lower stage (DVD).

This position is set when OPEN/CLOSE key is pressed for more than 2 second at all positions except full open.

Map DISC (DVD) can only be inserted/ejected at this position.

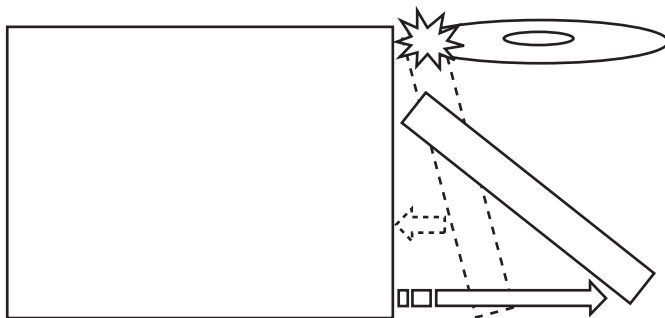
At the full open position, the closed position is restored when OPEN/CLOSE key is pressed for more than 2 second, and LAST position is restored when it is pressed quickly.



#### (5) Error Angle

Besides the above 4 positions that can be operated by the user, this system has the error angle (approx.  $45^\circ$ ) as an escape from danger in case of stopping due to an obstruction.

If operation becomes impossible in the angle of  $45^\circ$  or smaller, it opens to this position so that the obstruction (assuming a finger getting caught) can be released completely.



## 2. FLAP Operation Specification

A

### (1) Reset Start

- No operation at full open position. It moves to the closed position at positions other than full open.

### (2) ACC ON

- No operation at full open or closed position.
- At ANGLE/half open position, it closes once and then returns to the LAST position.

■

### (3) ACC OFF

- No operation at closed position.
- It closes in 3 seconds when it is at positions other than closed.  
However, it shifts to standby status when DISC is at half position.
- If it is in FLAP operation, it closes after completing the current operation.

B

### (4) ACC OFF/ON

- If ACC ON is detected within 3 seconds after ACC OFF, the current condition is continued.
- DISC is at half position, it is closed after loading.

■

\* "ACC detection" here includes chatter period.

That is, "ACC detection within 3 seconds" means 2.5 seconds + chatter period 0.5 seconds, and the actual ACC OFF/ON interval is "within 2.5 seconds."

### (5) DISC Insertion

- When DISC is inserted for either CD or DVD, it restores to the LAST position.

C

### (6) ANGLE Key

- Angle is adjusted in 5 steps from FULL CLOSE (0°) to the maximum angle (approx. 20°) (1STEP slides in horizontal direction by approx. 6mm).
- It is closed when the system is at the maximum angle.
- Though continuous operation is executed by pressing the key for more than 1 second, it stops when the maximum angle is reached.
- If the opening exceeds the maximum angle, ANGLE key operation becomes disabled.

■

### (7) Pressing OPEN key quickly

- If the system is at FULL CLOSE/ANGLE position, it opens to the half open position (CD insertion opening position) in 1 action.
- If it is at half open position, it restores the LAST position.
- If it is at half open position and DISC at half position, it restores the LAST position after reloading.
- CD EJECT key becomes enabled at the opening of half open position or later by this operation.

D

### (8) OPEN Key Pressed for 2 Second or Longer

- If FLAP angle is at positions other than full open, it moves to full open position.
- DVD EJECT key becomes enabled only at the full open position by this operation.

■

### (9) Obstructions

#### a. During CLOSE operation

- It opens to 45° if the angle at which operation was disabled was less than 45°.
- It shifts to the open direction by 1 angle if the angle at which operation was disabled was 45° or larger.

E

#### b. During OPEN operation

- It shifts to the close direction by 1 angle from the angle at which operation was disabled.

■

F

## 3. Correlation of slide position and angle

	Pulse A	Pulse B	CD EJECT OKSENS	OPEN SENS	CLOSE SENS	POSITION	
CLOSE ↑	0	0	1	1	0	0	ANGLE 0 (FULL CLOSE)
	0	1	1	1	0		
	1	1	1	1	0-1		
	1	0	1	1			
	0	0	1	1	1	1	ANGLE 1
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	2	ANGLE 2
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	3	ANGLE 3
	0	1	1	1	1		
OPEN ↓	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	4	ANGLE 4
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	5	ANGLE 5
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	6	—
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	7	—
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1	8	—
	0	0	1	1	1		
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	9	—
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1		
	0	0	1	1	1	10	—
	0	1	1	1	1		
	1	1	1	1	1		
	1	0	1	1	1	11	—
	0	0	1	1	1		
	0	1	0-1	1	1		
	1	1		1	1		
	1	0	0	1	1		
	0	0	0	1	1	12	HALF OPEN (CD insertion)
	0	1	0	1	1		
	1	1	0	1	1		
	1	0	0	1	1	13	—
	0	0	0	1	1		
	0	1	0	0-1	1		
	1	1	0		1		
	1	0	0	0	1		
	0	0	0	0	1	14	FULL OPEN (DVD insertion)

## 4. Emergency Process

A

4.1. There are following 7 FLAP-related emergency conditions:

- (1) Reversed insertion of a CD
- (2) Insertion of an unreadable CD
- (3) Half loading of CD
- (4) Reversed insertion of a DVD
- (5) Insertion of an unreadable DVD
- (6) Half loading of DVD
- (7) When there is a physical obstruction on sliding track

4.2. FLAP process in emergency conditions

B

For (1), (2), (4), and (5),

- The same process as normal insertion (LAST position after loading) is executed and then the error message is displayed.
- No automatic ejection.

For (3) and (6),

- The same process as normal insertion (LAST position after loading) is executed.
- Basically, no sliding operation is executed if emergency status is detected before the sliding operation.
- If emergency occurs while sliding in open direction, it slides in close direction by 1 position and then stops sliding.
- If emergency occurs while sliding in close direction, it slides in open direction by 1 position and then stops sliding.

C

For (7),

- If emergency occurs while sliding in open direction, it slides in close direction by 1 position and then stops sliding.
- If emergency occurs while sliding in close direction, it slides in open direction by 1 position and then stops sliding.
- If sliding waveform change by angle key pressing, etc. does not appear for 500ms due to obstruction, etc., it slides in the opposite direction by 1 position and stops sliding.  
If it does not return to the position to be returned by 1 position in error even after 750ms, it stops at the position.
- If close sense SW does not turn ON for 500ms due to obstruction, etc. during transition to full close, it slides in the open direction from the current position by 1 position and then stops operating.
- If open sense SW does not turn ON for 500ms due to obstruction, etc. during transition to half or full open, it slides in the close direction from the current position by 1 position and then stops operating.

4.3. Emergency specification in CD/DVD disc error (above (1) – (6))

D

- Operation is basically identical to normal discs, and the only special process is error message display.
- No processes such as automatic ejection of CD/DVD in error are executed basically.
- When a disc is inserted once, it can only be ejected by the DISC eject key.

4.4. Emergency display and alarm tone

E

- In case of a CD/DVD error (including reversed disc), the corresponding error message is displayed so that each error condition can be recognized.
- An alarm tone is sound to notify sliding disabled conditions when sliding operation becomes disabled.

F

G

H

## 5. FUNCTION CHART

(1) Full Close (ANGLE 0)

	ANGLE key	Quick pressing of OPEN/CLOSE	Pressing of OPEN/CLOSE for more than 1 second	ACC ON	ACC OFF
Normal	1 step DOWN ANGLE 1	Half open	Full open	No change	No change

(2) Angle Adjustment (ANGLE 1~5)

	ANGLE key	Quick pressing of OPEN/CLOSE	Pressing of OPEN/CLOSE for more than 1 second	ACC ON	ACC OFF
Normal	Angle +1 Full close when ANGLE is 7	Half open	Full open	Return to LAST position after full close	Full close

(3) Half Open

	ANGLE key	Quick pressing of OPEN/CLOSE	Pressing of OPEN/CLOSE for more than 1 second	ACC ON	ACC OFF	CD insertion	CD EJECT key
Normal	Disabled	Return to LAST position	Full open	Return to LAST position after full close	Full close	Return to LAST position	CD ejection
CD half	Disabled	Return to LAST position after reloading	Full open	Return to LAST position after reloading	No change		Disabled

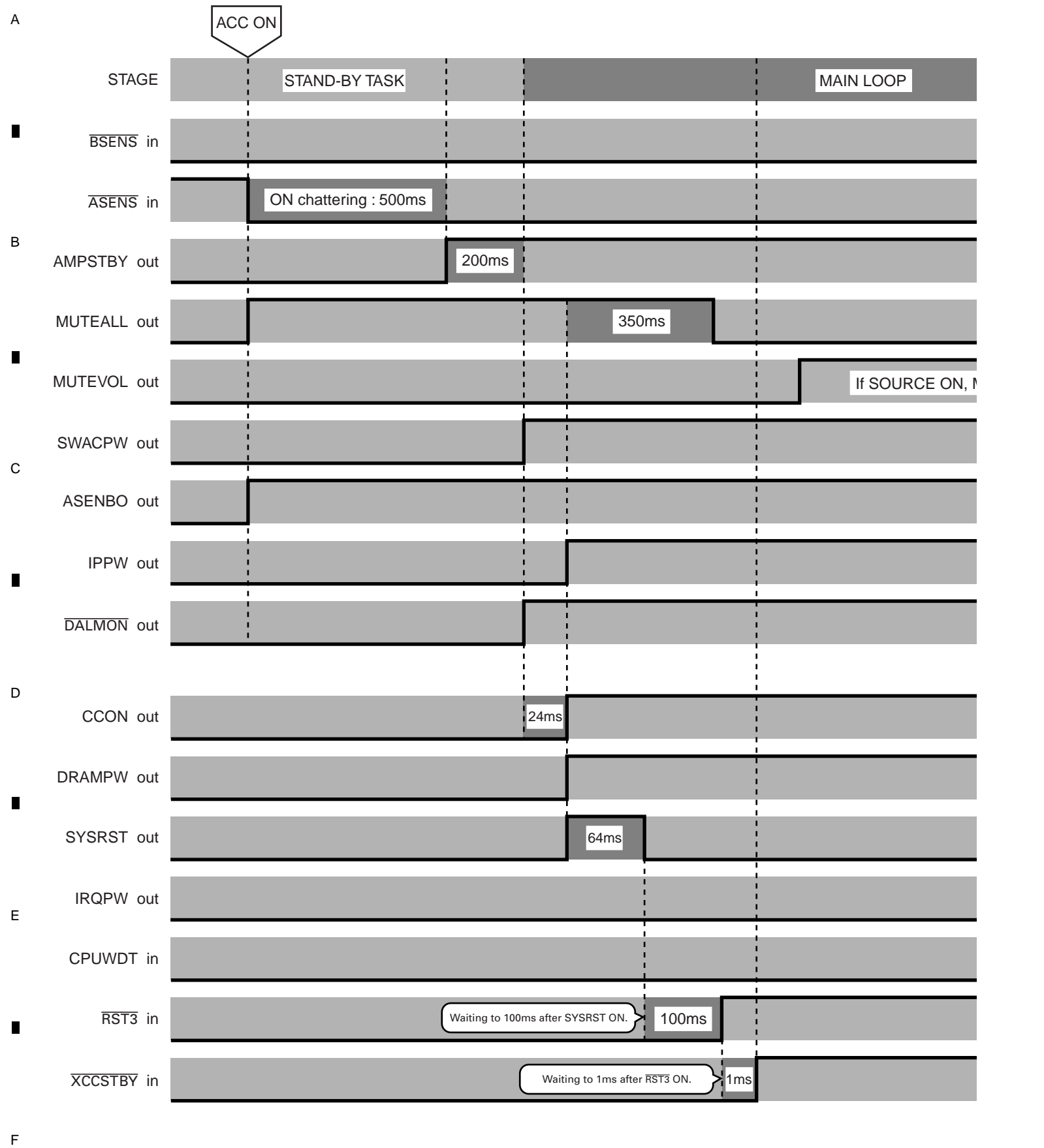
(4) Full Open

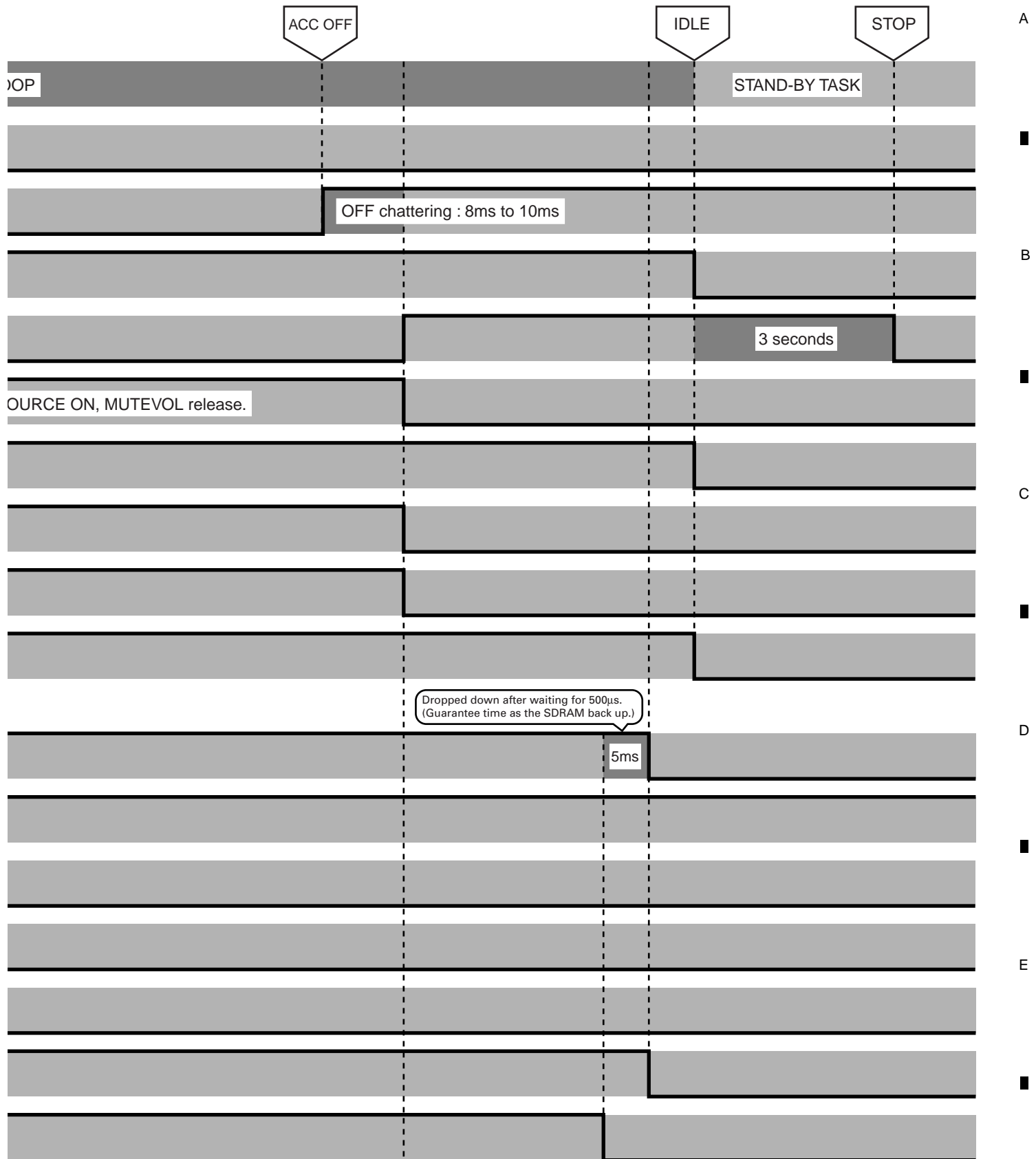
	ANGLE key	Quick pressing of OPEN/CLOSE	Pressing of OPEN/CLOSE for more than 1 second	ACC ON	ACC OFF	CD insertion	DVD insertion	CD EJECT key	DVD EJECT key
Normal	Disabled	Return to LAST position	Disabled	No change	Full close	Return to LAST position	Return to LAST position	CD ejection	DVD ejection
CD half	Disabled	Return to LAST position after reloading	Disabled	Return to LAST position after reloading	No change			Disabled	
DVD half	Disabled	Return to LAST position after reloading	Disabled	Reloading only	No change				Disabled

(5) Obstruction

	During CLOSE operation	During OPEN operation
Less than 45°	OPEN to 45°	1 angle CLOSE
45° or larger	1 angle OPEN	1 angle CLOSE

7.3.2 OPERATIONAL FLOW CHART

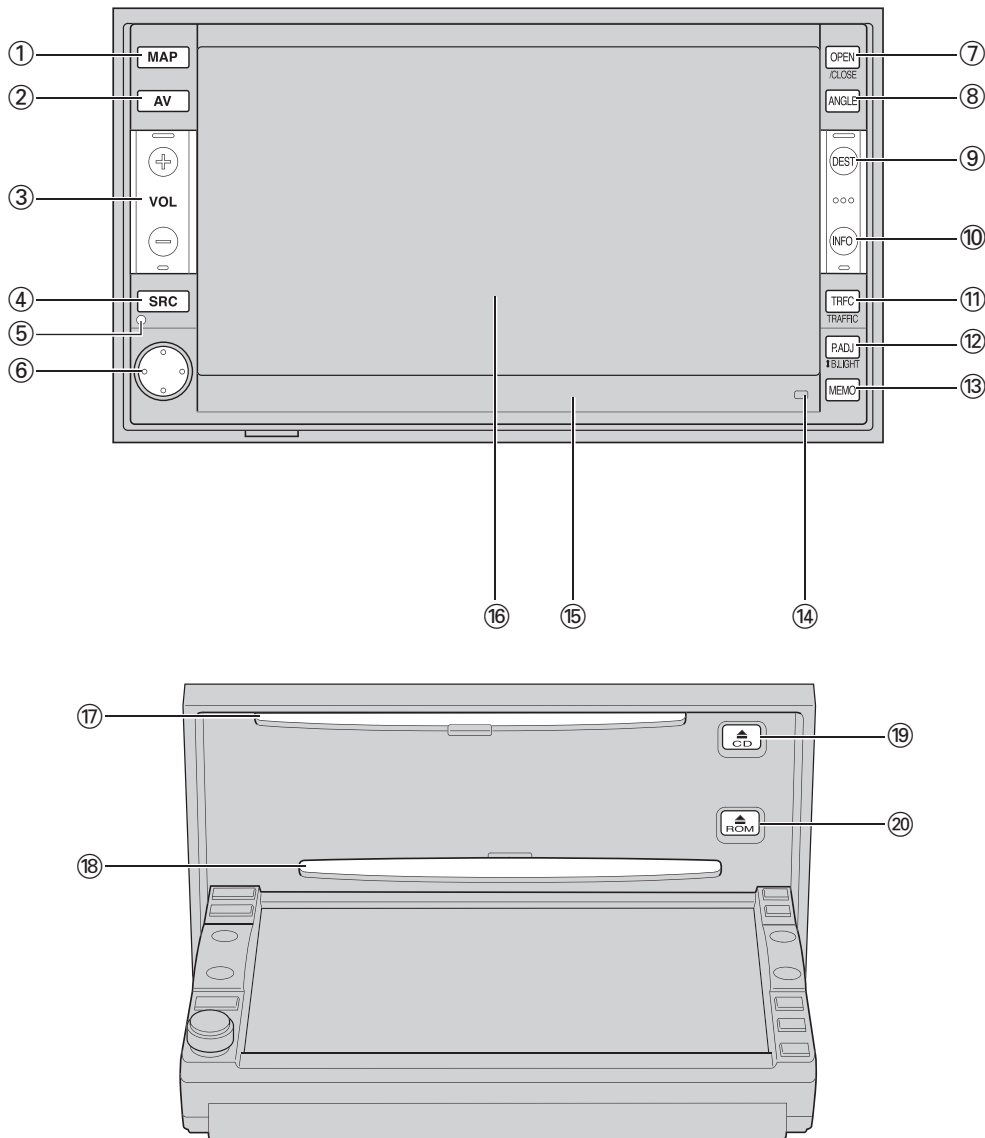




# 8. OPERATIONS

## Navigation Unit

This section gives information about the names of the parts and main features using the buttons.



### (1) MAP button

Press to view the map or return to guidance. Also, when the map is scrolling, pressing this button returns you to the display of the map of your surroundings. Use to switch the view mode of the navigation when the map of your surroundings is displayed. If you press this button while in the audio operation screen, the screen changes to the Navigation map screen.

### (2) AV button

Use to switch between Navigation map screen and audio operation screen.

### (3) VOL (+/-) button

Pressing on the + side of the button to increase the volume while pressing on the - side of it to decrease the volume.



**(4) SRC (SOURCE) button**

This unit is turned on by selecting a source. Press to cycle through all of the available sources.

Press and hold to turn the source off.

**(5) RESET button**

Press to return to the factory settings (initial settings). Some information items are not erased.

**(6) Joystick**

Move to do manual seek tuning, fast forward, reverse and track search controls, etc. Push to display the menu for the Audio operation.

**(7) OPEN/CLOSE button**

Press to open or close the LCD panel and access the CD and DVD-ROM loading slot. Operation varies depending on the position of the LCD panel and the length of time of pressing this button.

**(8) ANGLE button**

Press to change the LCD panel angle.

**(9) DEST button**

Press to display the **Destination** menu.

**(10) INFO button**

Press to display the **Info/Traffic** menu.

**(11) TRFC button**

**When the XM tuner (GEX-P10XMT) is connected\*:**

Preset button for XM Instant Traffic & Weather audio service. Select XM audio source, and find appropriate Instant Traffic & Weather channel. Hold down this button while on this channel to assign preset.

**When the XM tuner (GEX-P10XMT) is not connected:**

Not used.

**(12) P.ADJ/B.LIGHT button**

Press to enter the **PICTURE ADJUST** mode.

Press and hold to turn off the back light of the LCD panel. To turn on the back light, press this button again.

**(13) MEMO button**

**When the XM tuner (GEX-P10XMT) is connected and the XM source is selected\*:**

Press and hold this button to memorize the track currently being played.

This button flashes when the memorized track is playing on a station other than the one which you are currently on. If you press this button while it is flashing, the station changes to the one playing your track.

**When the XM tuner (GEX-P10XMT) is not connected:**

Not used.

**(14) Ambient light sensor**

Senses ambient light. This system automatically adjusts the brightness of the display to compensate for ambient light.

**(15) LCD panel****(16) LCD screen****(17) CD loading slot**

Insert a CD to play.

**(18) DVD-ROM loading slot**

Insert a DVD Map Disc.

**(19) CD EJECT button**

Press to eject the disc from the CD loading slot.

**(20) DVD-ROM EJECT button**

Press to eject the disc from the DVD-ROM loading slot.

\*: GEX-P10XMT sold separately is required, in addition to an active subscription to XM Satellite Radio service.

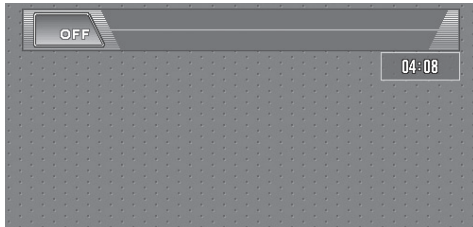
## Turning the Unit On and Selecting a Source

### CAUTION

- If the program is not installed, see Operation Manual and install the program.

### 1 Turn the ignition switch (ACC) ON.

The Navigation System's power supply comes on.



### 2 Press SRC button to select a source.

Press **SRC** button repeatedly to switch between the following sources:

“**XM**” (XM tuner) — “**SIRIUS**” (SIRIUS tuner) — “**RADIO**” (tuner) — “**TV**” (television) — “**AV**” (video input) — “**S-DVD**” (DVD player/multi-DVD player) — “**CD**” [CD, MP3/WMA/WAV](built-in CD drive) — “**M-CD**” (multi-CD player) — “**EXT-1**” (external unit 1) — “**EXT-2**” (external unit 2) — “**AUX**” (Auxiliary equipment)

Press and hold to turn the source off.

In the following cases, the sound source cannot be used

- When a unit corresponding to each source is not connected to this unit.
- When no disc is set in the CD loading slot.
- When no disc is set in the DVD-player (“**S-DVD**”).
- When no magazine is set in the multi-CD player.
- When no magazine is set in the multi-DVD player.
- When the “**AUX**” (auxiliary input) is set to off.
- When the “**AV INPUT**” (video input) is not set to “**VIDEO**”.

External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.

When this unit's blue lead is connected to the vehicle's auto-antenna relay control terminal with the “**AUTO ANTENNA**” is set to “**SOURCE**”, the vehicle's antenna extends while this unit's source is turned on. To retract the antenna, turn the source off.

## Adjusting the Volume

- Use **VOL (+/-)** to adjust the audio sound level.

With this product, press **VOL (+/-)** to increase or decrease the volume.

To adjust the navigation volume, go to the navigation menu.

## Turning the Source Off

- Press **SRC** button and hold until the source turns off.

This product can be switched off by turning the ACC (ignition) OFF.

## Inserting/Ejecting a Disc

### **⚠ WARNING**

- Do not use with the LCD panel left open. If LCD panel is left open, it may result in injury in the event of an accident.

### **⚠ CAUTION**

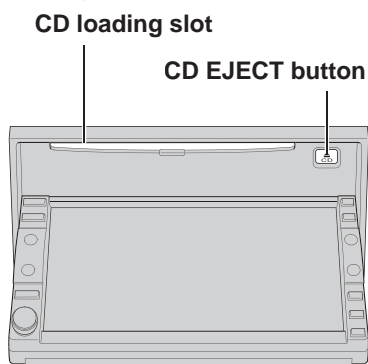
- Do not open and close the LCD panel with hands by force. This may cause malfunction.
- When opening, closing and adjusting the angle of the LCD panel, be careful not to get your finger caught.

The LCD panel will be closed automatically with the turning of the ignition switch.

## Inserting a CD

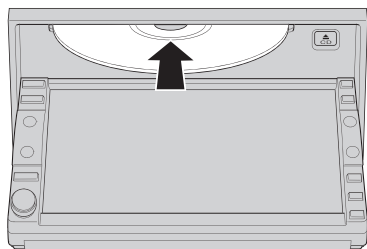
### **1 Press OPEN/CLOSE button.**

The LCD panel opens halfway, and the CD loading slot appears.



To close the LCD panel, press **OPEN/CLOSE** button again.

### **2 Insert a CD into the CD loading slot.**



If you insert a CD, the LCD panel closes automatically, and then format reading will start.

Make sure the CD loading slot is empty before inserting a CD into the slot.

When a disc is already loaded in the CD loading slot, select the CD source by pressing **SRC** button.

You can use **AV** button to switch between navigation map displays and audio operation displays.

The built-in CD drive plays one, standard, 12-cm or 8-cm (single) disc at a time. Do not use an adapter when playing 8-cm discs.

Do not insert anything other than a disc into the CD loading slot.

If you cannot insert a disc completely or if a inserted disc is not recognized, check that the label side of the disc is up. Press **CD EJECT** button to eject the disc, and check the disc for damage before inserting the disc again.

If the built-in CD drive does not operate properly, an error message such as ERROR-11 may be displayed.

## Ejecting a CD

### **1 Press OPEN/CLOSE button.**

The LCD panel opens halfway.

### **2 Press CD EJECT button.**

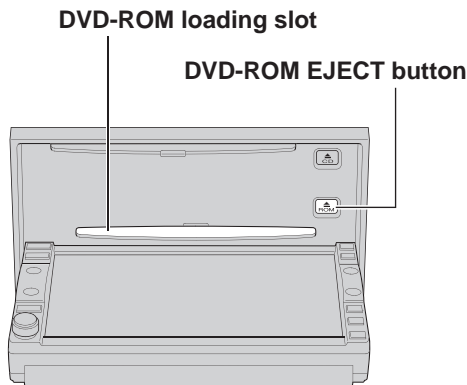
The CD is ejected.

### **3 Press OPEN/CLOSE button.**

The LCD panel closes.

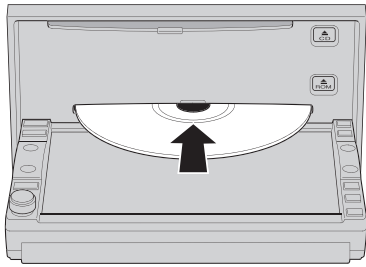
## Inserting the DVD Map Disc

- 1 Press and hold OPEN/CLOSE button.**  
The LCD panel fully opens, and the DVD-ROM loading slot appears.



To close the LCD panel, press **OPEN/CLOSE** button again.

- 2 Insert the DVD Map Disc into the DVD-ROM loading slot.**



If you insert the DVD Map Disc, the LCD panel closes automatically, and then format reading will start.

Make sure the DVD-ROM loading slot is empty before inserting a DVD Map Disc. Inserting the DVD Map Disc reboot DVD navigation mode.

Do not insert anything other than a disc into the DVD-ROM loading slot.

If you cannot insert a disc completely or if a inserted disc is not recognized, check that the label side of the disc is up. Press **DVD-ROM EJECT** button to eject the disc, and check the disc for damage before inserting the disc again.

## Ejecting the DVD Map Disc

- 1 Press and hold OPEN/CLOSE button.**  
The LCD panel fully opens.
- 2 Press DVD-ROM EJECT button.**  
The DVD Map Disc is ejected.
- 3 Press OPEN/CLOSE button.**  
The LCD panel closes.

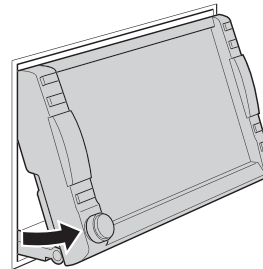
## Adjusting the LCD Panel Angle

### ⚠ CAUTION

- Do not open and close the LCD panel with hands by force. This may cause malfunction.
- When opening, closing and adjusting the angle of the LCD panel, be careful not to get your finger caught.

The LCD panel will be closed automatically with the turning of the ignition switch.

- **Press ANGLE button to adjust the LCD panel to an easily viewable angle.**  
You can adjust the angle of the LCD panel every time you press the **ANGLE** button. The LCD panel angle continues changing as long as you press **ANGLE** button and hold.



When you press the **ANGLE** button with the maximum angle, the LCD panel closes all the way.

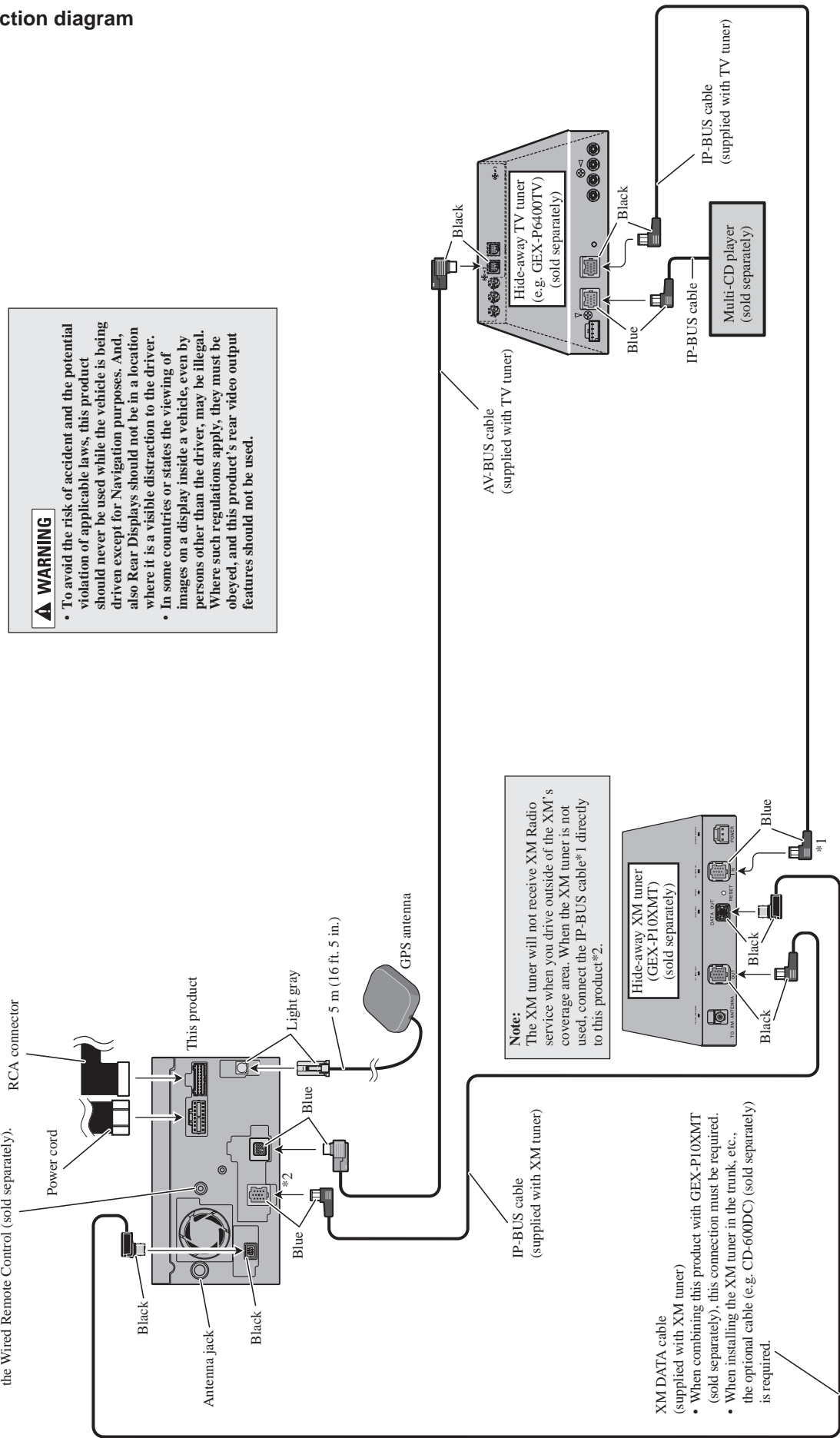
The adjusted angle of the LCD panel will be memorized and the LCD panel will automatically return to this angle the next time the turning of the ignition switch (ACC) on.

## ● Connection diagram

### Connecting the system

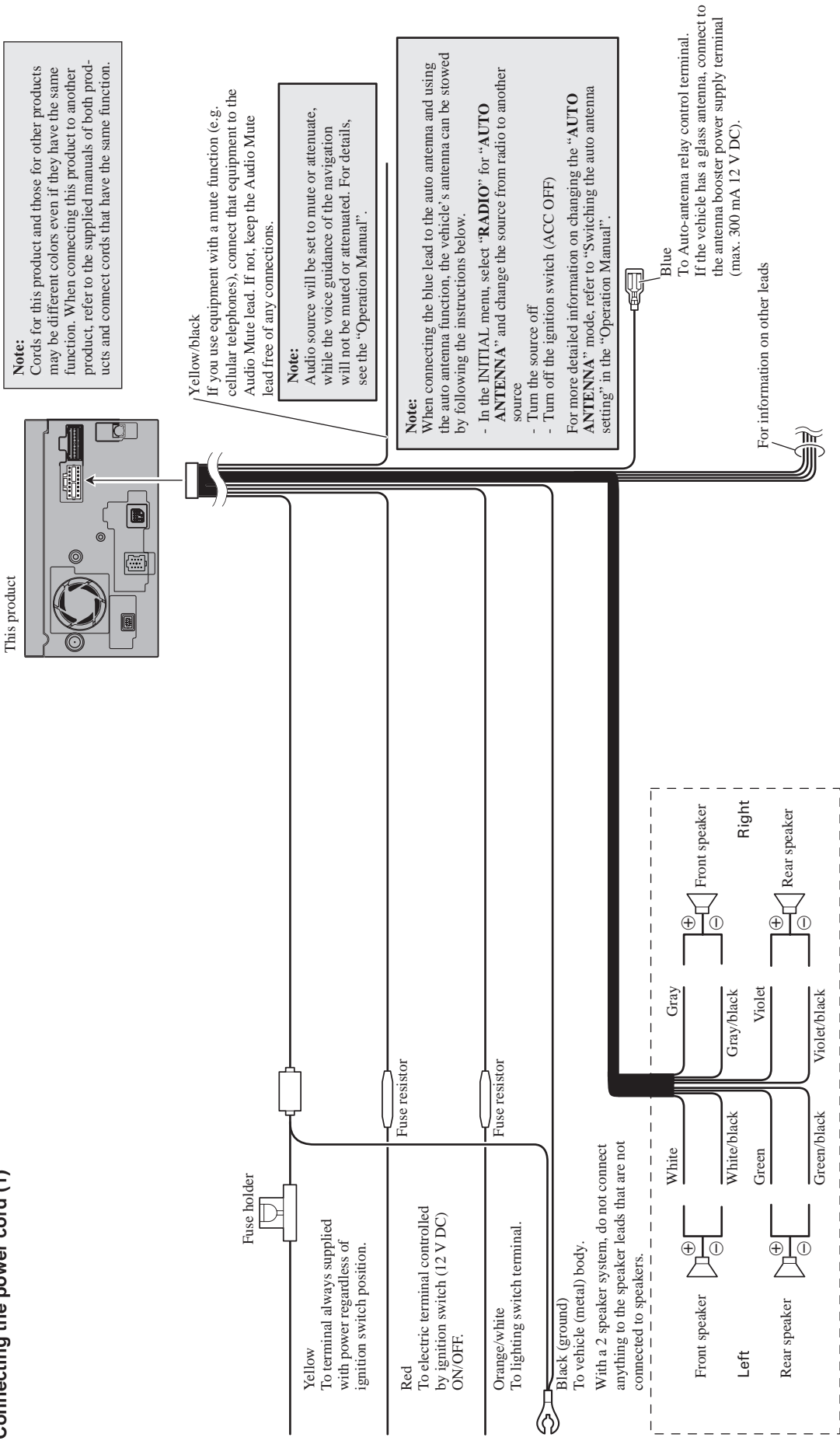
#### WIRED REMOTE

Please see the Instruction Manual for the Wired Remote Control (sold separately).

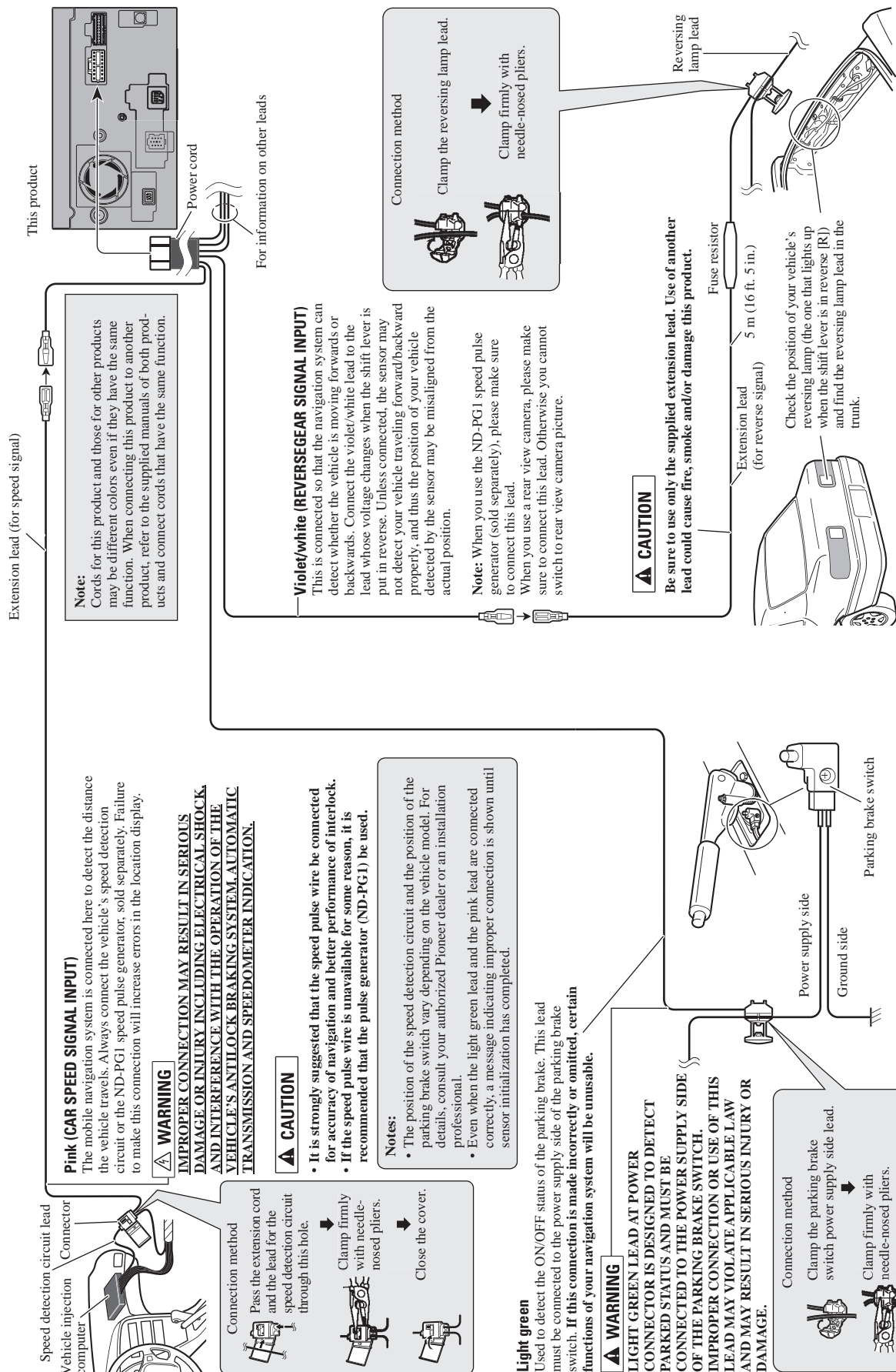


A  
B  
C  
D  
E  
F

Connecting the power cord (1)



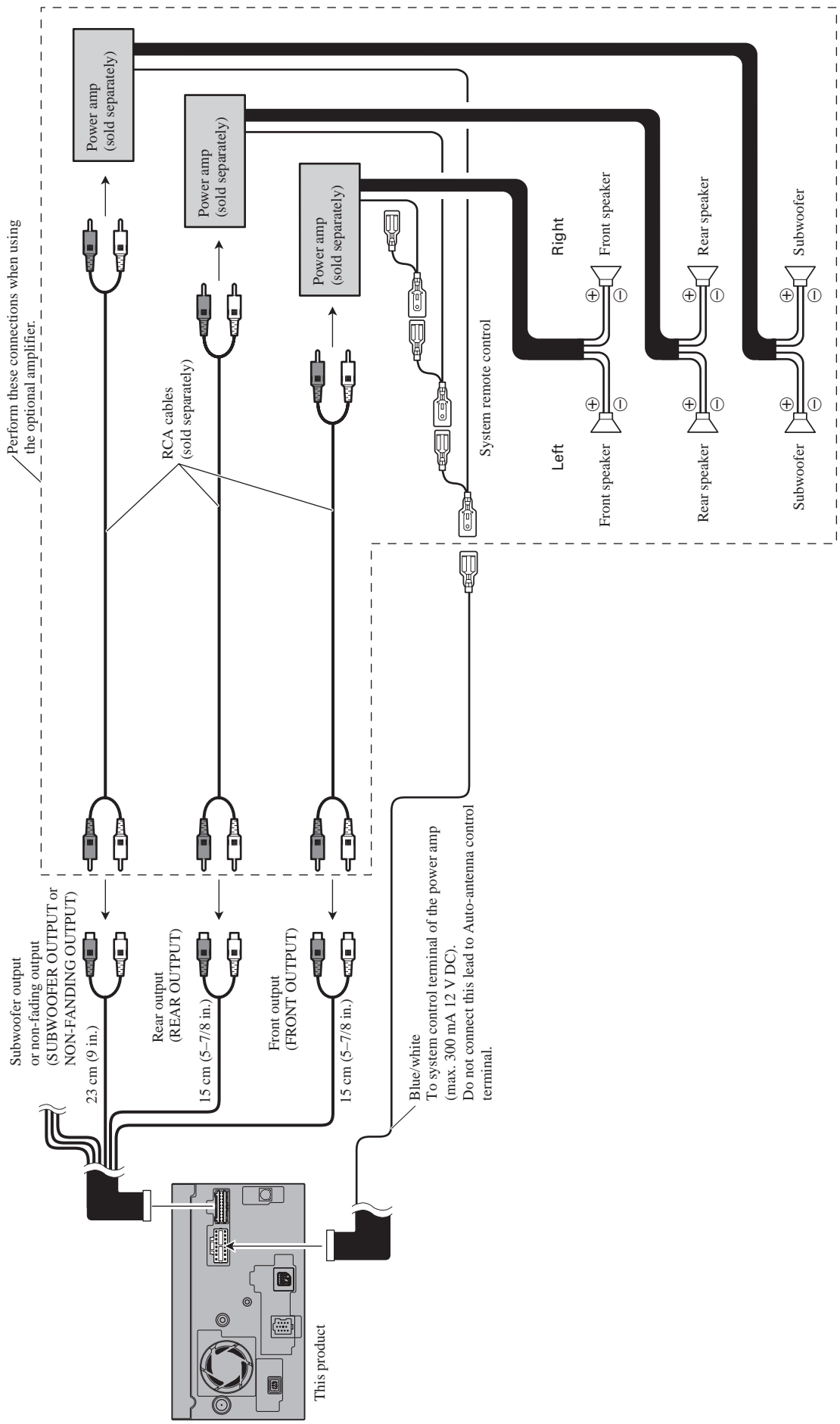
## Connecting the power cord (2)





A  
B  
C  
D  
E  
F

When connecting to separately sold power amp





## *After Installing this product*

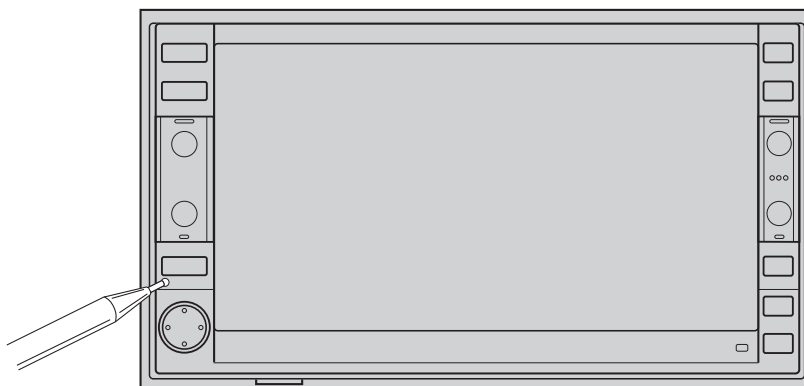
### **1. Reconnecting the battery.**

First, double-check that all connections are correct and that this product is installed correctly. Reassemble all vehicle components that you previously removed. Then reconnect the negative (–) cable to the negative (–) terminal of the battery.

### **2. Start the engine.**

### **3. Press the RESET button on this product.**

Press the RESET button on this product using a pointed object such as the tip of a pen.



### **4. Enter the following settings:**

- 1 Install the program in the navigation system.
- 2 Make any necessary installation angle adjustments.
- 3 Drive until the initialized sensors start operating normally.
- 4 Set the time and language.

After installing this product, be sure to check in a safe place, that the vehicle is performing normally.

## ● Jigs List

Name	Jig No.	Remarks
45-Pin FFC	GGD1321	DVD Mechanism Module(MS3)(CN601) <--> CC Unit(CN2)
23-Pin BBR FFC	GGD1307	CD Mechanism Module(S10.1)(CN901) <--> System Unit(CN1301)
80-Pin FFC	GGD1406	System Unit(CN1701) <--> CC Unit(CN605)
20-Pin Extension Cord	GGD1327	System Unit(CN1802) <--> CC Unit(CN801)
30-Pin FFC	GGD1171	CC Unit(CN702) <--> Connector Unit(CN2804)
33-Pin FFC	GGD1262	CC Unit(CN701) <--> Monitor PCB(CN5002)
Monitor Adjustment PCB	GGF1416	For OSD display (*1)
Test Disc	GGV1237	Operation check
Test Disc	TCD-782	Checking the grating(CD)
L.P.F.		Checking the grating(Two pieces)
Test Disc	GGV1018	Checking the grating(DVD)



Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
DVD, CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Portions to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008